THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK.

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

Perfect Agriculture is the true foundation of all trade and industry.—LIEBIG.

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Communicated for the Farmers' Cabinet.

Experiments with Guano.

The following interesting account has been kindly forwarded for insertion. It is part of a letter from Edward Stabler, of Sandy Spring, Md., to S. K. George, of Baltimore, and is dated in the Seventh month last. We copy from the *Rockville Weekly Reporter*.—ED.

ALL my experiments with guano, have not alike proved successful; and as it sometimes occurs, that even in a failure, either the operator himself, or others, derive future benefit by investigating the causes, I will give the results in both cases. I think I can very readily trace to the proper cause some of the failures reported.

Experiment 1st.—On a field of oat stubble, which was in corn the previous year, and had from 75 to 100 bushels of lime to the acre, I selected a strip of one acre, near the middle, and extending through the field; after ploughing, the land was once harrowed;—the ground broke up very dry and in bad order for seeding—and about the 7th of the Ninth month (September) 200 pounds of guano were sown by hand, without admixture with anything; the ground was again well harrowed, and after remaining a couple of days, for the guano to assimilate with the soil, it was sown with about two and a half bushels of Mediterranean wheat; then well harrowed and *rubbed* in. About half of the field, and adjoining the guano on one side, was just previously sown with the same kind and quantity of wheat, with the addition of twelve bushels of ground bones to the acre.

On the other side of the guano, and including the remainder of the field, there were about twenty-five ox cart-loads—35 bushels to the load—of barn-yard manure to the acre; and the seeding, the same as the other parts. In two or three weeks it was evident at a glance, that the guanoed part had the start in vegetating; and which it steadily maintained until harvest.

The relative growth of the crop was generally estimated by those who examined it, at about the same yield, for those portions with ground bones and manure; but inferior, by 33 to 50 per cent. to the guano—that there was this difference, I am fully satisfied; but having only harvested the guanoed part separately, we cannot tell "what the half bushel says." For experiment, the quantity of ground bones was varied on several adjoining *lands;* at no time was there a marked difference, between six and

twelve bushels, or twelve and eighteen bushels; but between six and eighteen bushels, it was plainly seen. The yield in grain of the first quality, from the acre with guano, is 35 bushels—no account taken of the screenings or small grain—with by far the heaviest crop of straw I ever harvested. A single bushel weighed 65 pounds. The ground was accurately measured; and by weighing a dozen or two of the sheaves from different parts of the mow, to obtain an average size, the whole crop was estimated at four and a half tons. But a small portion, either of this acre, or the field, stood thick enough; hence the great growth of straw. Although the quantity of seed sown might be considered ample if it all vegetated, owing to the drought when sown, it is probable much of the seed was lost; there being just enough moisture to swell, but not to sprout the grain which lay near the surface. The opinion "that more seed would have made a better yield," has, I am aware, been controverted by some. In the present case, I am certain such would have been the result. All are not aware, perhaps, that in a bushel of Mediterranean wheat, there are not as many grains by about 50 per cent., as in a bushel of White bearded wheat; or by about 33 per cent. of the Red chaff bearded wheat—neither does the Mediterranean wheat usually branch so well as either of the others. Fair as the present yield is, the addition of two to three pecks more of seed would have added in equal proportion to the crop; and forty bushels or more, could just as easily have been raised on the acre. In good ground, I have never seen this wheat too thick; and very rarely indeed thick enough.

Experiment 2nd.—About three weeks later I sowed a lot—corn ground—with 150 pounds of guano, and two bushels of White bearded wheat to the acre—about equal to three bushels of Mediterranean wheat. The land was limed in the spring, 70 bushels to the acre. The growth on this lot *was about thick enough*, and will, I expect, produce more wheat to the acre than experiment No. 1.; there was less straw, but the heads equally large and well filled. Adjoining this piece was a potatoe lot, which had been heavily limed and manured in the spring; it was sown with two and a half bushels of Mediterranean wheat, and twelve bushels of ground bones to the acre. To judge by the eye at harvest, the guanoed lot will yield nearly two to one; and certainly without any material difference in the quality of the soil, or other advantage on either side, manure excepted.

Experiment 3rd.—I sowed 100 bushels of ground bones on a part of my oat crop, at the rate of about 16 bushels to the acre; it was sown heavier than I intended, and only extended over about two thirds of the field. Adjoining to the bones, and both extending through the field, guano was sown at the rate of 200 pounds to the acre: the crop is materially diminished by the drought; but the difference in favour of the guano is not less than 50 per cent; and at a cost, as compared with the ground bones, of just one half; others have estimated the yield at double: this land was also limed the year preceding—about 70 bushels to the acre.

Experiment 4th.—Finding the crop of grass likely to be very short, I ploughed up part of a clover lot—that had several years previously 100 bushels of lime to the acre—and sowed four bushels of corn broadcast. Similar to the mode adopted in my first experiment, there were 200 pounds of guano sown to the acre; but leaving a strip of 10 feet wide through the middle of the lot, without guano. The crop has suffered greatly from the drought, and the part with guano the most, i. e., the blades are more shrivelled, but is still, of the best colour: all who have examined it, estimate the difference in favour of the guano, at two, three, and some even four to one. Since the longer continuance of the dry weather, the difference is not so marked; there is yet, however, more than two to one in favour of the guano.

As this is *the era of experiments*, I will briefly allude to another, not altogether foreign to the general subject. Anticipating a dry season, we used the subsoil plough after the bar-share, in this lot; but after eight or ten rounds, were compelled to abandon it, and double the team on the plough: the result is, a marked increase of the growth almost to a line where the subsoil plough was laid aside.

Experiment 5th.—Just previous to planting corn, the land had 60 bushels—in all 120 bushels—of lime to the acre; and as there was no rain to slake it, it was broken up and spread in a caustic state, and the land well harrowed. Within a few days, and for experiment,—for I feared the contact of the guano with lime in this state—300 pounds were sown broadcast on one and a half acres; the ground again harrowed and the corn planted. It came up beautifully; perhaps not a hill in a thousand missing. When four to six inches high, an even table spoonful of guano,—or a handful to three hills—was dropped around and near the plant, but not on it—the part sown broadcast excepted; and occasionally leaving a row without guano, the Cultivator

following to mix it with the soil. Not long after the application of the guano, the corn was attacked by that greatest of scourges, the bud worm; eating into the centre of the stalk, near the surface of the ground, and the first and largest growth literally destroyed; so much of it as out-grew the injury, was for a long time dwindling and weak.

This experiment I consider a failure; for at no time could any material difference be perceived in the growth of the corn, with and without guano. A part of the field is low or meadow land; and has not suffered materially from the drought; here the corn is heavy; but whether attributable to the guano, I know not: unfortunately, no rows on this part were left without guano: and therefore allow it to be a failure, which I attribute to the contact of the guano with the quick lime. For, on the lands apparently similar and equally limed, though a year and more preceding, there are numerous experiments in the vicinity on corn crops, where the effects of the guano are most decided; both when sown broadcast before planting, and applied to the hill.

I have also applied guano on my melon vines; a small handful to the hill, producing the most luxuriant growth, both of vines and fruit, as compared with the adjoining hills, without any. It was applied a day or two before planting the seed, and well chopped in with the hoe—the hills were once watered with a weak solution—the ground being too dry to sprout the seed—by soaking three guano bags in half a barrel of water.

It may be observed as a general, if not invariable rule, that if seed of many, if not most kinds, come into immediate contact with unadulterated guano, they fail to vegetate. In my experiments I carefully avoided mixing the guano with plaster, ashes, or any other substance; because, if the crop was benefited, I wished to know with certainty what to attribute it to.

My letter has already extended to an unreasonable and unexpected length; but I shall, I hope, be excused for a few additional remarks.

The case of failure reported by John Mackenzie in the Southern Planter, given "for the benefit of the agricultural community," *will* benefit many, I have no doubt. I for one thank him for the communication. Presuming that it was the pure Peruvian guano, his experiments as well as many others, go to establish the fact, that by a top-dressing on wheat in the spring, the "money and labour expended on guano have been entirely thrown away." In my case, a different method of using it—and if I am not mistaken, both were of the same cargo, the Orpheus—has produced results altogether satisfactory.

I have heard of but one such successful application; the case reported by our Senator, J. A. Pearce, of Chestertown. But when applied as a top-dressing on wheat *in the fall*, so as to have the full benefit of the winter rains, it has in some cases succeeded well. Dr. Wm. B. Magruder, one of our most enterprising and successful farmers and planters, informed me yesterday, that he believed his wheat crop was doubled by 200 lbs. of guano to the acre, applied soon after the wheat came up. He has also used it in his tobacco crop with evident advantage, as he thinks—I saw the latter; and although it looked well, I am no judge of the crop, or quality, *until manufactured.* I have examined many of the experiments of my neighbours, who joined our club in the purchase of nineteen tons last spring; and I expect every individual is so far pleased with the results, that at least as much more, —and some I know would double their purchases,—would be used this fall, if the Peruvian guano—with which all our experiments have been made—could be had at the same price.

The question has often been asked, how much wheat my land would have produced to the acre, without guano,—this question cannot be answered with certainty; but to judge by the crop of the same kind of wheat on the adjoining field last season, and without manure; and also of crops under similar circumstances of my neighbours this season, I think 10 to 12 bushels a full estimate; 15 bushels at the outside. In their care not to let the manure extend beyond its prescribed limits, my hands did not spread it quite to the guano; this left a strip through the field without any manure; and I am confident there was not one-third of the wheat on it; a space of 15 to 20 feet wide should have been left. Dr. Dupuy asks, "if the drought was as severe here, as generally through the country?" I presume nearly so, or quite.

Our oats and hay are not more than half crops; and if not relieved ere long by rain, our corn crops will be still less.

The spring was unusually dry, and the wheat in experiment 1st, suffered in consequence; yet the situation being lower, was more in its favour than the manured part. The ground bones had in all respects equal advantages with the guano: in neither, does any difference appear in the timothy and clover; both are good. Estimating the yield of the adjoining acre with ground bones, by the dozen sheaves, and it cannot

vary much from the actual result, the latter yielded nearly 28 bushels.*

For the benefit of those who are opposed to taking agricultural works, or refrain from doing so, which amounts to the same thing, I would add, that this field was completely worn out when purchased by me; the higher part, without soil; and the lower part, like mortar in the winter and spring, baked under the summer's sun like a brick. I had attempted draining, but not successfully.

Meeting with an able essay on draining, in either the Cultivator or Farmers' Cabinet, I concluded to make another effort.

The field was well broken up in the fall and winter, and in the spring a heavy covering of lime was put on; the draining was deferred, however, by a long illness confining me to the house for months. The crop of corn was planted; and the yield was not over 15 bushels to the acre. Previous to sowing in oats, there were not less than five to six hundred yards of surface and under drains made.

I believe the *increased* crop of oats nearly paid for both the lime and drains. The result in the wheat has been stated.

Four years since, in the then state of the land, it would not have produced more than five bushels of wheat to the acre; now it is light and mellow, and will, most likely, produce an increase in grass of four or five to one. It is not a very difficult problem to solve, whether there has been a gain or loss in the transaction; when by the expenditure of four dollars for 200 pounds of guano, *twenty bushels of wheat additional* are raised to the acre; or that a single dollar for a year's subscription to an Agricultural Journal, should be the means, or suggest the idea for improvement, by which land that formerly did not produce over five to ten bushels, will now yield 30 to 40 bushels to the acre.

EDWARD STABLER.

Liquid Manures and their Uses.

NOTHING is more common than for authors, on various subjects in gardening, to recommend liquid manure to be applied, without in one instance, from the beginning to the end of their remarks, saying what they meant by it, of what it is to be composed, or what quantity of any kind of manure and water composes it. Now there is hardly a more uncertain thing, hardly a more vague expression, than liquid manure. Various are the manures of the present day. Leaf mould is vegetable manure, and the most innocent of any; for it is composed of nothing but the leaves which were the produce of the earth returned to earth again; and if you could make a ton of it hold in solution with a butt of water, and it were applied instead of water itself, it could do no harm; but this, perhaps, never entered the thoughts of those who recommend liquid manure.

We have seen the dung of poultry made into liquid manure; one shovelful of it, in a state which we may call partly decomposed, put into a barrel of water, that is, 36 gallons. This was being applied efficaciously to potted plants about every third watering, and to out-of-door crops once a week. Every time it was used it was stirred up until the barrel was half emptied, when the liquor was used without stirring. The contents at the bottom were always cleaned out every time the liquor was emptied, that the quality should always be alike, and not be altered by the sediment of the former mixture. This was thrown on the ordinary dunghill, where it could do no harm.

In another establishment sheep's dung was used, at the rate of a peck to a barrel of water. This was put in one day, and stirred up four or five times; and the next day, when used, it was stirred again. This was being used with success to large camellias and orange trees, while they were making growth, and with considerable advantage, and also to some beds of layers newly planted out, without any watering between at all; but as it was explained to us, the soil might have been covered all over an inch or two thick, and then left to wash in by rain and artificial watering, without doing any injury; and certainly, if the appearance of things were a criterion, there could be no doubt of it.

We have seen cow-dung used, when decomposed, in rather large proportions; and here the precaution of using boiling water was taken, on account, as it was said, of the great disposition of cow-dung to breed the maggot or small grubs of some kind. The proportion was a spadeful to half a barrel, and stirred well several times before the water cooled. The liquid was used the next day to Carnations and Piccotees, in pots, just coming into bloom, and it was said to give them a good colour, and add to

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* A portion of this acre was unintentionally sown heavier with ground bones, say 16 to 18 bushels to the acre, instead of 12 bushels as intended. In this case also, the first crop more than repays the cost of manure, and will yield large returns in the grass crop, for years to come. We *know* the ground bones to be a durable manure. For a *mere experiment* one of my neighbours used a few pounds of guano on his corn last year; the effect on the oats this season, is as marked as on the corn.

their strength. Again, we have seen the new cow-dung used to a bed of Ranunculuses, which were literally destroyed by the black maggot, and scarcely a healthy root taken up; the smell of the cow-dung evidently drawing or attracting some fly, which blowed and bred there, for there was nothing to be seen but myriads of them about the soil when stirred a little. Here the mixture was cold water, and the proportion about a spadeful to half a barrel, but the waterings with this were repeated without intermission. Since this I have actually seen a recommendation of Dr. Horner's, to form a Ranunculus bed with liquid manure and the soil together; the former to be saturated with the latter, as thick as cream. This must be pure theory; because, wherever there is green cow-dung used, there will the cow-dung-bob—as the fishermen call it—and other nasty maggots, breed by millions, if the fly be in the neighbourhood at all, and we never knew a place where cows were kept or grazed in the neighbourhood, that was not infested with it.

Another liquid manure, which we have seen tried side by side with guano, was common night-soil. It was offensive, it is true; for it had not been disinfected by any process. Two pounds of each were tried in twenty gallons of water; the former was at first very troublesome to hold in solution in water. It was only done at last by mixing it with something like an equal weight of powdered lime, and when well amalgamated and thinned with boiling water, it was stirred and allowed to cool. The guano was, unlike manure, pounded and bruised, and dissolved with its weight of lime. These two fertilizers were tried on alternate half rods of onions; the night-soil was exceedingly efficacious, the guano not nearly so much; indeed, not much better, if any, than a half rod left to the common watering-pot. But here it may be mentioned, that the guano was not subject to analysis, and therefore nothing can be said as to guano in general from this experiment, although it may be safely taken as something like evidence in behalf of night-soil.

It must now strike any one, that to order liquid manure to be applied to anything, without stating how it is to be made, is the most vague and uncertain thing in the world. In a farm not far from the metropolis, the drainings of a cow-house, that is, the pure wet, without any of the manure, were used with the greatest advantage, with its equal quantity of water, and applied by a contrivance similar to a water-cart, though more clumsily made, all over a pasture field twice during the spring, and, as compared with the other pasture of the same character adjoining, the crop was much heavier. The same stuff, with three times its quantity of water, was used to saturate the piece of ground previous to sowing cabbage, brocoli, and other seeds of that nature, and the first crop came up, turned yellow, and died; on raking it well over, and sowing again, the seedlings came fine, strong, and healthy, and made good plants.

Liquid manure for dahlias, when the ground is not prepared beforehand, has been made of cow-dung, well decomposed, at the rate of a pint to a pail of water, and did wonders, which was rendered evident by leaving some to plain water only, and observing the great difference in the growth and size of flowers, foliage, and plants, altogether. Here was a very large proportion of dow-dung; and, as the mixture was stirred and used directly, before the dung or any of the particles could settle, the earth was, after a few waterings, covered with the fibres and waste, as it were, of the dung, which, perhaps, with the washing of the rain, found nourishment still, when watering was unnecessary.

Much has been said lately about sulphate of ammonia and water as a fertilizer, at the rate of half an ounce of sulphate to a gallon of water. This we have heard affirmed to be good if used once to every five or six waterings, but not oftener, as the effect would be bad.

Upon the whole, we do hope that those who talk or write of liquid manure, would be good enough to say of what it is to be composed, what quantities are to be used, and when and how it is to be applied; not in a vague, but a positive way. It is certain that, after pots have been washed through and through with plain water for months, liquid manure may be of great service occasionally, to supply what has been washed away; but it should be manure adapted to the plant, and the direction plain.—*London Gardener and Florist.*

Change of Seed Wheat.—If wheat growers would take a little pains to obtain for seed, wheat grown on a different kind of soil from their own—which in this country is easily done—they would find their crops improved. This is a well established fact in Agriculture, and of sufficient importance to deserve more attention than it generally receives.

It is said that milk set in glass pans, will produce more cream, and that of a better quality, than when set in other pans. They are made of the common green bottle glass.

Importance of Manure.

In agricultural establishments, in which the importance of manure is duly appreciated, every precaution is taken both for its production and preservation. Any expense incurred in improving this vital department of the farm, is soon repaid beyond all proportion to the outlay. The industry and the intelligence possessed by the farmer, may indeed almost be judged of at a glance by the care he bestows on his dunghill. It is truly a deplorable thing to witness the neglect which causes the vast loss and destruction of manure over a great part of these countries. The dunghill is often arranged as if it were a matter of moment that it should be exposed to the water collected from every roof in the vicinity—as if the business were to take advantage of every shower of rain to wash and cleanse it from all it contains that is really valuable. The main secret of the admirable and successful husbandry of French Flanders, may perhaps lie in the extreme care that is taken in that country to collect everything that can contribute to the fertility of the soil. Our agricultural societies, which are now so universally established, would confer one of the greatest services on the community, if they would encourage by every means at their command, economy of manure; premiums awarded to those farmers who should preserve their dunghills in the most rational and advantageous manner, would prove of more real service than premiums in many other and more popular directions.

The place where the dung of a farm is laid, ought to be rather near to the stables and cow-houses. The arrangements may be varied to infinity, but they ought all to combine the following conditions: 1st. That the drippings from the heap should not run away, but should be collected in a tank or cistern under ground; 2nd. That no water, except the rain which falls on the dung-heap, or any water that may be thrown upon it on purpose, should be allowed to drain into this reservoir; 3rd. That the place for the dunghill be of size enough to avoid the necessity of heaping the manure to too great a height. The ground upon which the dung is piled ought to slope gently one way or another—from each side towards the centre is best—so that the drippings may be collected in the tank or cistern. It is also desirable, that the soil underneath should be clayey and impermeable; where it is not so, it becomes necessary to puddle, to cement, or to pave the bottom of the dunghill stance as well as the bottom and sides of the tank or cistern. The water which runs from the heap should be thrown back upon it occasionally, by means of a pump and hose, so as to preserve it in a state of constant moistness. The opening into the tank, which is best placed immediately under the centre of the dung-heap, is closed by means of a strong grating in wood or iron, the bars being sufficiently close to prevent the solid matters from passing through. One very important arrangement, one which, in fact, must on no account be overlooked, is that the drains from the stables and cow-houses be so contrived, that they all run to the dunghill. The litter, however abundant, never absorbs the whole of the urine, especially at the time when the cattle are upon green food; and it would be quite unpardonable in the husbandman did he not take measures to secure this, the most valuable portion of the manure at his disposal.

The litter mixed with the droppings of the animals, and soaked with their urine, ought to be carried from the stables to the dunghill upon a light barrow. The practice of dragging out the manure with dung-hooks, which is often permitted when the field upon which it is to be spread is at no great distance, ought on no account to be allowed; the loss from the practice is always considerable.

Materials ought not to be thrown on the dunghill at random or hap-hazard; they should be evenly spread and divided; an uneven heap gives rise to vacancies, which by and by become mouldy, to the great detriment of the manure. It is of much importance that the heap be pretty solid, in order to prevent too great a rise of temperature, and too rapid a fermentation, which are always injurious. Particular care must also be taken that the heap preserves a sufficient degree of moistness, not only of its surface but of its entire mass, which is effected by watering it frequently. At Bechelbronn, our dung-heap is so firmly trodden down, in the course of its accumulation, by the feet of the workmen, that a loaded wagon drawn by four horses, can be taken across it without very great difficulty. The thickness of the heap is not a matter of indifference: besides the convenience of loading, which must not be forgotten, any great thickness may become injurious by causing the temperature to rise too high; circumstances occurring which should compel us to keep a mass in this state for any length of time, the decomposition would make such progress as to occasion very great loss. Experience has shown, that the thickness of a dung-heap ought not to exceed from about four feet and a half to six feet and a half; it ought certainly never to exceed the latter.

With a view to prevent the drying of the dung-heap and its consequences, too great a rise in temperature and destruction of manure, it is the practice in some places to arrange the dung-heap on the north side of a building, which is undoubtedly advantageous, but not always to be realized, especially in connection with a farm of some magnitude, where the immediate vicinity of a large mass of matter in a state of putrid fermentation, is not only unpleasant, but may be unwholesome. In the north of France, the dung-heap is sometimes shaded from the sun by means of a row of elms, and the shelter thus secured is vastly preferable to that which it has been proposed to obtain by means of a roof or shed, which, besides other inconveniences, would be found costly at first, liable to speedy decay, &c. If circumstances, such as the smallness of the farm, the permeable nature of the soil, &c., prevent the construction of a reservoir, there is risk of the dung-water being quite lost; but such waste may be prevented by covering the bottom of the pit or stance for the dung-heap with a bed of sand, peat marl, or any other dry and porous substance capable of absorbing liquids. This practice is often followed by the farmers of Alsace.—*Boussingault's Rural Economy.*

Food for different Latitudes.

From Fownes' Prize Essay on Chemistry, as exemplifying the wisdom and beneficence of the Supreme Being.

"We are accustomed to look with horror and disgust at the food of these poor people, as we in our ignorance and presumption dare to call them; to commiserate those who, as our northern navigators relate, prefer a piece of tallow-candle, or a draught of train-oil, to the fare of an English man-of-war; but a little more consideration might perhaps show us, that the blubber and fat of the arctic cetacea and fish, the only food the inhabitants of these countries can obtain, really constitute the only sort of food which could enable them to bear up against the extremities of cold to which they are subject. There is no other substance but fat, and that in very large quantity, which would answer the purpose required. It is a substance exceedingly rich in hydrogen, and in the body eminently combustible; weight for weight, it will generate a far larger amount of heat, when burned in the blood, than any thing else which can be taken as food. It will be wiser, then, instead of condemning, as filthy and abhorrent, the tastes and propensities of the Esquimaux, to consider them as a special adaptation, by an unspeakably benevolent Providence, of the very wishes and inclinations of the individual to the circumstances of his life.

"But this is not all: the same individual who, when in a warm or temperate climate, craves a large proportion of bread and vegetable food, and turns with aversion from fatty substances, experiences, when transported to the frozen regions of the north, a complete revolution in his tastes and desires. Nothing will then satisfy him but fat: the flesh of deer, fish, to be acceptable, must be loaded with fat; he takes delight in sucking the marrow from the bones; nothing in the shape of grease comes amiss to him; he longs for it, he desires it as much as he formerly loathed it. But this new, this induced state, only lasts as long as his mode of life requires; removal to a milder region restores, to a very great extent, the first condition."

Blind Bridles.

Look and reflect; use your own intellect. Yes, use your thinking powers, friends, they were given you to use and not abuse. Blind bridles! truly named, surely. Art never invented a more fatal thing to the eyes of horses than when she devised this plan of depriving the horse of what nature intended he should enjoy. But, says one, why are blinders injurious to the horse? Because they gather dirt and heat around the eyes. Dirt irritates the eye and heat produces inflammation. These bridles so entrammel the eyes of the horse, that he is compelled to be constantly straining them to see his way. This over exertion of the nerve soon brings on disease. Eyes were not made in vain. Had they been needless, they would not have been located in the head. They were placed on the corner of the head that he might have the advantage of looking in different directions. Men, in the abundance of their imaginary wisdom, concluded the horse had too much sight, and they wished to curtail it: hence the origin of blind bridles. Think of this seriously and you will abandon the use of so destructive an appendage. Remember, that blind bridles and diseased eyes are inseparably connected. Custom hoodwinks the senses of men, as much as blind bridles do the vision of horses.

John Maddock,
Farrier and Blacksmith.

Where is the use of blind halters? if horses were unaccustomed to them, they would be no more liable to frighten without, than with them. Why are they not just as necessary with the saddle, as in the carriage or the team? Who would think of sitting on a saddle with his horse's eyes three-fourths shut out from the light of day? and how much finer and nobler would this noble animal appear in all situations, with his eye untrammelled?—Ed.

Premium—diseased Potatoes—American Agricultural Association.

At a meeting of the Association, Monday, May 5th, the following resolution, offered by Dr. Gardnêr, was unanimously adopted:

Resolved, That this Association offer a liberal premium for a series of investigations into the nature and origin of the disease of the Potatoe, to be made under the conditions imposed by the Executive Committee.

The Executive Committee, therefore, offer under the preceding resolution, a premium of $50 for the best investigations made during the ensuing season, in accordance with the plan drawn up by the chemist of the Association, and appended. They also impose the following conditions: The competitors to be or to become members of the Association; the papers and specimens to be forwarded free of expense to the Executive Committee, through their Secretary, Dr. Gardner, 412 Fourth street, N. Y., on or before the 1st of November; communications, whether successful or otherwise, to become the property of the Association; all persons in the United States may become competitors. The premium will be declared at the general meeting in January next. The papers sent to bear a motto without the name or address of the author, these particulars being contained in a sealed letter superscribed with the same motto. Investigations terminating without the appearance of disease in the potatoe, but pursued in accordance with the ensuing conditions, will be received in competition.

The following conditions to be observed by competitors for the premium of the Association, are respectfully submitted by order of the Executive Committee.

D. P. Gardner.

May 8th, 1845.

1st. The papers to be entirely original, and in no part transcripts from other works, to contain a record of the observations made during the growth of the plants and conducted on at least 150 specimens.

2nd. The variety and character of the seed potatoes, the mode and time of planting, the nature of the soil, its condition of drainage, the manures used and previous tillage, to be fully detailed.

3rd. A daily register to be kept from the time of sowing to securing the crop, containing the temperature in the sun and shade, and the dew* point in the shade at 12 o'clock, with the state of the sky, the occurrence of rains, dews or other meteorological conditions. The manner of taking the dew point to be stated.

4th. Five entire plants to be taken up during each week after the third week from planting, and a record made of the condition of the leaves, stems, roots and tubers, the last being cut open and carefully inspected with a simple microscope, and all unnatural appearances written down with the day of the observation. Diseased proportions to be preserved by drying and forwarded to the Association.

5th. All insects discovered on the green portions, roots, &c., to be examined, and at least twelve specimens of each species in the perfect (imago) state to be preserved and forwarded to the Association. When practicable, the caterpillar to be described or figured, and the habits of the insect recorded. This condition to be performed in the case of all insects whatsoever found preying on the herbage of roots.

6th. At least twelve specimens of tubers in every stage of disease with a similar number in a sound condition of the same variety to be forwarded. The leaves and upper parts of any plants presenting a remarkable appearance, to be carefully dried between sheets of unsized paper, and at least twelve specimens sent, with all other objects in the same box or parcel as the written communication.

* If the observer be not provided with an instrument for ascertaining the dew point, the following simple method may be adopted:—Let a little fresh spring water be placed in a dry wine glass and introduce a thermometer, stir it freely in the fluid and ascertain the temperature at the moment the dew on the exterior of the glass is disappearing; if spring water be not cool enough to create a deposit of dew, add a few drops of iced water until dew is seen. The dew point is the temperature at the moment dew first appears or vanishes but the latter is the best time for examination. D. P. G

Profit of Hens.

It is frequently asserted that poultry is more plague than profit. But this, like many other assertions, must be taken with proper qualifications. We contend, if you have a good breed of fowls, take proper care of them, and are near a reasonably good market, that the keeping of fowls is as profitable a business for the amount of capital invested in it, as a farmer's boy, or the women of the family, can be engaged in. To prove this we will cite one example. When we were at the pleasant farm, last September, of Messrs. H. and J. Carpenter, of Poughkeepsie, their brother, Mr. Gerard Carpenter, showed us an account of the number of eggs laid by their hens up to that time from the 1st of January. It was so exact and satis-

factory, that we requested him to continue it to the end of the year, which he has obligingly done, and now here is the result.

He commenced on the 1st of January, 1844, with 67 hens and 3 cocks. Out of this flock were sold and lost by the 1st of May, 7 hens; from that time up to the 16th of September, they lost two more. Since then we are not informed what the losses have been. It would probably be fair to set down the average stock of hens during the year at 60 head. These laid in the following months, all of which were consumed by the family or sold:

In January,	191	eggs.
February,	400	"
March,	892	"
April,	1037	"
May,	1086	"
June,	700	"
July,	838	"
August,	740	"
September,	540	"
October,	113	"
November,	21	"
December, —	none.	
	6558	eggs.

In addition to this number, it is supposed full 300 were used for sitting, got lost, broken, or spoiled, which are not taken into the above account. The average price that the eggs brought at Poughkeepsie, was $1 per hundred, which makes their value $65 58
Chickens raised 101, at 20 cts. each 20 20
$85 78

We suppose that this flock of hens may have consumed grain enough during the year, equivalent to 70 bushels of corn. This is allowing three-fourths of a gill per day throughout the year to the flock of hens, and nothing to rear the chickens; but as, during the summer, hens that have the range of a farm need no feeding, this quantity of grain is considered ample for their support.

At 50 cents per bushel for the corn, this would make the expense of their feed, $35, which, deducted from the value of eggs and chickens, leaves a nett profit of $50 78. It is considered that the manure of the hens, and the insects they destroy during the season, are equivalent to taking care of them.

The actual feed of the above hens was as much corn mixed with a few oats, as they would eat; the grain being placed where they could always get at it. In the winter they had a little meat. They were not confined at all, and had access to lime and gravel while the ground was covered with snow. Their roosting place was comfortably enclosed under the barn.—*Agricultural Almanac.*

From the American Agriculturist.

Culture of the Peach.

In reading a communication a few months since, of N. Longworth to the Cincinnati Horticultural Society, I was surprised to find that this eminent cultivator had imbibed several material errors in relation to the peach and its cultivation. He remarks, "that the pit of a seedling peach will produce its kind, is well known," &c.

There certainly can be no distinction intended here between a seedling or natural, and an inoculated peach tree. All our varieties of peaches are seedlings; there can be no other way of originating new varieties of any fruit whatever. Budded or grafted trees bear fruit precisely the same as that of the tree from which the bud or graft was taken; suckers from the root will produce fruit similar to that of the stock from whose root they spring. Consequently, all new varieties must spring from seed, and the above assertion cannot be correct, that seedlings will produce their kind, because, if such were the case, no new varieties could arise.

It is, as Professor Lindley truly remarks, an axiom in vegetable physiology, that seeds reproduce the *species* only, while buds will multiply the *variety*. That the pit of the Oldmixon peach will reproduce a peach is certain; but it is equally uncertain that it will produce a tree, whose fruit can claim the most distant affinity to the Oldmixon variety. Although there is always this uncertanty in perpetuating a variety, and it is the general nature of a seed to perpetuate the species only to which it belongs; yet there is always a visible tendency in it to produce a seedling more like its parent, than any other variety of the species. For example, suppose the pit was sown of an Oldmixon peach, if this peach stood isolated where the stigma of the flower that produced the pit could not have been impregnated with the pollen of other varieties, it would be more likely to produce a fruit, fine, large, and sweet, like its parent, than one that was small and worthless. Yet there would be no certainty of obtaining a fruit resembling the Oldmixon, although it might be equal, if not superior, to it in size and flavor.

The remarks of N. Longworth quoted above, have, therefore, a tendency to mislead the tyro in horticulture, although such

a result is undoubtedly very far from his wish or intention. I speak only of the present result of planting pits of seedling fruit. I have no doubt that by judicious experiments upon several generations of trees, one might be obtained whose fruit would produce a tree that would bear fruit very nearly, if not precisely similar to its parent. It is on the same principle that gardeners have obtained the seed of many fine varieties of vegetables, which, although *varieties*, will produce the same. Let a person plant the pit of the Oldmixon peach, and inoculate the tree that springs from it with the Oldmixon bud, let him plant the pit borne by this inoculation, and bud the tree again with the Oldmixon in a similar manner, and repeat this process for several generations, the result, I think, would be, that a peach would be obtained whose pit would uniformly produce the Oldmixon variety.

The cause of this result, I think, is founded upon true physiological principles. If the fruit of a tree produced from the pit of a budded peach partakes of the nature of the fruit, both of the stock and of the bud—and I have very little doubt that it does—then this "breeding in and in" must gradually assimilate the natures of the bud and of the stock, until the fruit of the one is very nearly, if not quite, the same as that of the other. I hope some amateur who has leisure and taste in these things, will try the experiment, and inform the horticultural public of the result. S. B. P.

Commercial Garden and Nursery, Flushing, L. I.

Poultry.

The economy of poultry may be classed under three heads; first, in their natural state, which is the department of the naturalist; second in their domestic state in the country with a full range of the farm-yard and fields in which the poultry-keeper is concerned, for his profit; and third, in their artificial state in or near towns, in pens or yards, which will chiefly engage my attention in the present article. The best and cheapest method of feeding I must leave to be detailed by those who keep poultry in large quantities.

Shelter.—Fowls should always be kept in a dry, warm sheltered situation—a southerly aspect is to be preferred—for they enjoy and benefit greatly by the "warms in the sun," as well as requiring protection from its scorching rays, and a secure (storm) shed for rainy weather. The roosting-house and laying-house, if separate, should communicate, that early layers may have early access to the nests, and also communicate with the storm-shed for the fowls to run in in security, if they should leave their roosts early in the morning. The nests should be numerous, either in boxes or baskets, not too deep but roomy, some situated high, some low, and as independent of each other as possible; each supplied with sweet, short, and soft straw, and a small nest-egg or two of chalk, the size of a pigeon's egg. If the nests be too deep, they break the eggs in jumping in and out, and if the nests are not roomy, sitting hens have no room to turn easily, and consequently break the eggs by not being able to get to them softly. They then eat the broken eggs, which gives them the habit of doing so at other times. They should roost warm at night, the perches high from the ground and of easy access, by means of lower ones or ladders. The more lightsome the house the better for promoting dry air and a free circulation; besides, fowls cannot see at all, being quite stupified and helpless in the dark, consequently the feather tribe always retire to roost before the sun goes down. Shutters to the glazed windows are unnecessary, except for better security, or to prevent fowls from leaving their roosts too early in the morning, to disturb ticklish neighbors, otherwise they come out almost as soon as daylight begins to appear. The feeding places, if under cover, so much the better, as a precaution for wet weather, and as far as possible removed from the nests, that the hens which happen to be laying at the time, or which may be sitting, may not be disturbed and enticed off their nest and eggs at improper times. Being evidently natives of a warm country, they are scarcely yet perfectly acclimated in our variable and colder regions; although so widely diffused from time immemorial over the whole face of the globe, they have retained a peculiar susceptibility of damp and chilliness, most of their diseases arising from rheum, or catarrh—catching colds. The lungs of fowls are particularly tender; the finer the species, the less is it hardy.

Cleanliness.—Fowls being cleanly by nature, thrive when regularly attended, but degenerate and sicken if neglected. In an artificial state of existence, they require to be supplied by art with what in nature they would obtain for themselves. For this purpose they should have a regular supply, in some convenient part of their shed, of sifted cinders daily to roll in and cleanse themselves, and which should be often changed. This precaution will keep them entirely free from vermin of any description.

Green Food.—This being quite as necessary for health as corn, to supply this re-

quirement of nature, they should have daily a good supply of sweet and fresh green vegetables. Cabbage and lettuce are the best—turnip-tops and watercresses—but on no account any sour plants, which scour them as do spinnach, the cuttings from grass plats, and most sorts of garden seeds, as their instinct does not serve them to choose the wholesome from the noxious weeds, more than it does animals that happen to stray into a clover-field, or happen to receive too large a quantity into their stables. I have known them to burst. Green food with fowls is an astringent, the very reverse of what vegetables are with us. This fact will not appear so surprising, when it is recollected that one takes them raw, and the other cooked.

A plentiful supply of clean water, in daily well-cleansed vessels, and wholesome food are necessary. Frequent changes, and mixtures of corn, improve the appetite. Barley is decidedly their staple food in this country; Indian corn, or sometimes rice, mixed, for a change. Oats occasionally, but in too large quantity, are apt to scour. Occasionally buckwheat and hempseed, as a stimulant, mixed with the barley for a change, are very beneficial, particularly whilst moulting. One meal may be composed of boiled or steamed potatoes, well smashed up whilst hot, with a portion of barleymeal, or oatmeal for a change, but which must be allowed to remain till cold. Books copying errors from one another, make a great mistake in advising food to be given hot. It is unnatural, they have no good cooks amongst them in their own state; and it is decidedly injurious to their digestive organs, except when fattening, when they are doomed soon to be killed for table. Feed twice a day at least, or three times if not to fattening; morning early, before the usual hour for laying, if possible; at noon, the noontide meal may be the potatoes as above directed, and before sunset—not later than four o'clock—that they may go to roost by daylight, or they will go without their food. Regularity greatly tends to health, and disturbance of any sort is very hurtful. Rice occasionally boiled in a cloth, greatly increases its bulk, and they are very fond of it. Reaumur says, that great economy is derived from steeping or boiling the barley, to increase its bulk, when they will be satisfied with one-third less quantity. But I cannot speak of this from my own experience, nor can I say that beneficial effects are produced by giving them much flesh, raw or boiled. But fat, as advised in books, produces scourings; spiced or salted meats, and kitchen stuffs, are certainly pernicious to their stomachs. In fattening for the table, when they are not required to live long, or show fine feather, this may not be of any consequence. Will some of your practical correspondents enlighten us? They require in pens, or small yards in towns, to be well supplied with grit, sand, and small gravel; slaked lime, and old mortar pounded is very beneficial, and serviceable in assisting to make the pen or yard dry. I will add to the above, that there is no economy in keeping poultry in towns, in small quantities, which is always exceedingly expensive, if well fed and taken care of; which, however, is compensated for, to those who wish to make certain that the eggs are quite fresh and newly laid. All calculations of expense must be erroneous, there being so many contingent expenses. As a source of trade, much depends upon rearing the best breeds, to be early in the season, laying in stock and store at proper times, having a ready sale for produce, and to "buy cheap, and sell dear."—*London Gardener's Chronicle.*

Liquid Manure.

It is now a pretty general belief among farmers, that there is "some good" in liquid manures; but, some how or other, we never see much preparation either for the collection or application of this, the cheapest and most valuable of all manures, and we verily believe that the subject is as yet scarcely thought of—in a way to lead to any practical result—by one *bona fide* rent-paying farmer out of a thousand. Now, having for several years been an experimenter in this way, and sensible of the very great importance and value of liquid manures, I shall here take the liberty of throwing in my mite to the general fund, by communicating the little I have gained by experience to my fellow-farmers.

As I discard all chemical formula—the tank, watering-cart, and other *et ceteras*, from my system, and attach the fertilizing ingredients to a substance which farmers can actually work in with spades and shovels, I have more hope that my plan will be followed.

Chemists, generally, do not tell us the reason why liquid manures will not do much good when applied in a fresh state, though this is perfectly plain to all reflecting men. Liquid manure, if applied upon an impervious or gravelly soil, in a fresh state, is not retained long enough for its decomposition to take place, or for the roots to drink it up. It is put on a liquid manure, and runs off in the same state; but apply it to a soil rich in decayed or decaying vegetable matter, and

on which a vigorous vegetation is going on, and it never fails of its extraordinary effects. The plan of administering liquid manures in a perfectly fresh state, is probably the best of any, were it not for the continued care and consequent expense necessary in supplying our crops with saturated water in all their stages throughout the year, and were we certain of the exact strength of the solution suited to their wants.

As we, therefore, cannot apply our liquid manures on the best principle, on account of the expense, we must try the next best plan, that of decomposing them by the aid of decomposed vegetable matter; and this can happily be done, to great perfection, by reducing the vegetable matter to the state of carbon or charcoal—which we make from peat, as being trifling in expense, easily pulverized, and withal an excellent manure of itself. We divide a shed into two compartments, one of which we make watertight, by puddling the side walls with clay to the height, say of two feet, and separated from the other compartment by a low watertight wall or boarding. This is my fermenting tank, which is filled half or three parts full of pulverized burnt peat, and the liquid manure from the stable, pig-styes, &c., directed into it. This is mixed up with the pulverized peat and allowed to remain three or four weeks, till the decomposition seems about completed, being occasionally stirred about after the composition has become about the consistency of gruel. The whole is then ladled with a pole and bucket over the low partition into the second floor, which is also three parts filled with carbonized peat; and as the second floor is meant merely as a filter, we have it lower on one side than the other, by which means, in the course of a day or two, the carbonized peat is left comparatively dry. The water having passed off at the lower side, the first or fermenting floor is again filled as before, and the contents of the second floor, if considered saturated enough, are then shoveled up into a corner, and allowed to drip, and further dry till used, which may be either immediately, or at the end of twenty years, as scarcely anything will affect it, if not exposed to the continued washing of pure water, or exposed to the influence of the roots of growing plants. By being thinly spread on a granary floor it soon becomes perfectly dry, and suited to pass through drill machines.

The mixing of the carbonized peat with the liquid manure on the first or fermenting floor, it will be observed, is for laying hold of the gaseous matters as they escape during the fermentation; perhaps other substances may effect this more effectually, but none so cheaply. I think by this plan it will be obvious to every one that a great many desiderata are at once obtained. In the first place, you get free of about 956 parts out of every 1,000 of the weight and bulk of manure, by the expulsion of the water; while at the same time you link all the fertilizing properties contained in it to one of the most handy vehicles—light, cleanly, and portable, and possessed of the peculiar property of holding together the most volatile substances, till gradually called forth by the exigencies of the growing plants. Lastly, you get free of the nasty tank, and the hogshead and the watering-cart, with all its appendages, and are no more bothered with overflowing tank or over-fermenting liquid, with weather unsuited for its application. You have merely to shovel past the saturated charcoal, and shovel in a little fresh stuff, and the process goes on again of its own will; while the prepared stuffs lie ready for all crops, all seasons and at all times.

The solid matter in the urine of the cow is estimated by very high authority, to be equal in value to its weight of South American guano.

I beg my fellow farmers clearly to understand, that I make no pretensions to this plan of applying liquid manure being a new discovery. It is merely a modification of your old and tried plan of bottoming your dung-hills with peat; but by charring, the peat is freed of its antiseptic qualities, and thus becomes of itself a much better and speedier manure, and an admirable filter. But even peat, thoroughly dried and perfectly pulverized, I have no doubt might answer the end indifferently well.—*Inverness Courier.*

On the Use of Lime.

A correspondent in the *American Farmer* makes certain inquiries, to which Dr. Darlington gives the following reply.—Ed.

The first inquiry is—"What effect would be produced by the application of lime on the surface of limestone lands?"

To this I may reply, that the farmers in the limestone valley of Chester county, are in the practice of applying lime freely on their land, and find it productive of the best effects,—especially in promoting the growth of the valuable *grasses.* Its benefit to the *grain* crops is not so striking; but, in agriculture, a good *grass turf* is of primary importance—particularly in a grazing country,—and wherever there is *such a turf,* the grain crops are rarely defective. It is re-

markable, that the soil which overlies the limestone rock, has been found to bear the heaviest dressings of lime. The farmers, in our limestone valley, have frequently applied as much as 100, and 110 bushels to the acre, with apparent benefit, but latterly, some of the most intelligent observers among them have expressed the opinion, in which I decidedly concur, that smaller quantities—say 40 or 50 bushels to the acre—repeated at proper intervals, are attended with better results. I believe a moderate *top-dressing* of lime,—equally distributed in a state of fine powder—every three or four years, is more beneficial than a heavy dose once in six or eight years; and this, I think, is true in all kinds of soil. It appears, then, that lime may be, and has been, used with advantage, on limestone lands.

"*Virginia*," next inquires whether, by successive cropping, lime is extracted from the *surface* soil, "where the substratum is limestone?"

To this I can only reply, that such seems to be the fact,—or at least, that experience has demonstrated the benefit of *repeated applications* of it, on limestone lands. The true *rationale* of the process, I must leave to the agricultural chemist.

As to the inquiry, whether "*sufficient* lime is kept in the surface soil—of limestone lands—by the action of the weather and the process of cultivation?" I am equally unable to give a satisfactory answer. The same experience, just referred to, would seem to indicate, that the surface soil does *not* derive "*sufficient* lime," from the processes mentioned, to keep it in the best condition of which it is susceptible; yet it is certain that limestone lands are generally of a better quality, and less readily exhausted, than most others. Hence I should infer, that they do derive *some* benefit from the rock beneath.

The next inquiry is, "Would the application of it—i. e., the limestone rock,—in a powdered state, to the surface of *such lands* be beneficial?" I am not enabled, by experiment, to answer this question; but I am informed it has been tried, without much benefit. In its native state, limestone is not so soluble in water, as when reduced to a calx, by fire—neither is it so well fitted to act upon the dead vegetable matter. In fact, I should judge powdered *limestone* to be nearly inert, and of very little value to vegetation, compared with *quick lime* in a pulverized state. This, however, is mere *opinion*. I have no doubt that *shells*, finely powdered, might be applied to land with advantage, for they contain a portion of *animal* matter; but, probably, even they would be more beneficial in a calcined state. While I am giving *opinions*, I may as well remark, that I think it of importance to apply quicklime in a minutely divided, or pulverized state—such as it assumes when first slacked. It can be not only more readily and equally distributed in that state, but must necessarily, I think, be more effective. I believe a large portion of its benefits are often lost, by careless farmers permitting it to get *too wet*, by long exposure, before it is spread. It then forms into little insoluble masses, and cannot possibly have the same effect as if minutely and evenly distributed. All bodies, to act chemically, must be minutely divided, and they must be applied where they are to act.

Excuse these hasty remarks. My object was merely to comply, as well as I could, with the request of your correspondent. If you think them worth the space they will occupy in your valuable paper, they are at your service. W. D.

West Chester, Pa., January 10th, 1845.

Cow losing her Horn.

On New-year's day, 1845, one of my cows in fighting another, with a fence between them, caught the horn in the rail and completely separated it from the pith. I was absent at the time, but my man who acted as assistant surgeon in the cases of the cow and the shoats, and who thought he had learned something from *a book farmer*, undertook to practice on his own account. He concluded, by reasoning on the nature of things, that as the horn was made to cover the pith, the pith ought to be covered, especially in winter. He accordingly shut up the cow by herself, and looking around, found the horn beside the fence lying on the ground, and as cold as a stone. It was replaced, and he went to my farm medicine chest, and taking therefrom a roll of sticking plaster, spread long strips of muslin with it, and wound the strips around the base of the horn. The result was, the next day the horn became warm at the base, and gradually extended upwards until the whole assumed its natural temperature. The plaster adhered more than a week, and upon examination at that time, the horn was found to be united. It is now three months since the accident, the horn is firmly fixed in its natural position, and the cow is well, and running at large with the others.—*Cultivator.*

A FINE cucumber sixteen inches long, from the gardens of Roswell L. Colt, of Paterson, N. J., was laid on the table at the New York Farmers' Club, on the 15th ult.

Report of the Committee on Wines.

[Appointed by the Cincinnati Horticultural Society in 1844.]

The Committee on Wines, beg leave respectfully to report:

That in order to fulfil the duty assigned them, of examining the specimens of the Wines produced in our neighbourhood, they assembled at the house of the president, where all those specimens which had been sent to the Society, were collected and arranged, and your committee then and there submitted them to the proper investigations, *secundem artem.*

Your committee, although by no means diffident in respect to their own skill and talents, in estimating the true character of the articles whose qualities they were called upon to determine, judged it expedient to ask the aid of several German gentlemen, who have been accustomed to judge of the qualities of the European Wines, to which those of this region bear the strongest resemblance; and in compliance with this request, Messrs. Brachman, Werk, and Rehfuss, attended their session, and politely afforded them the aid of their judgment and experience.

The Wines were designated by labels, which referred to sealed descriptions of their ages, owners, &c., and which were not opened until the judgments respecting them had been pronounced and duly recorded. The subjoined table gives the result of their trial.

Marks & Nos.	Verdict of the Judges.	Name.	By whom sent
C. A. 1837.	Good,	Catawba,	J. E. Mottier.
" 1844.	New, not matured,	do.	do.
" 1835.	Very good, resembling old Madeira,	do.	do.
" 1834.	Fine, resembling Muscat or Malmsey,	do.	do.
" 1843.	Good for new wine, with age will be of the best quality,	do.	do.
" 1837.	Good, high flavored,	do.	do.
" 1838, F.	Superior to any of the previous specimens,	do.	Dr. Flagg.
" 1831, F.	Good, resembling Hock,	do.	do.
R. H. 1837.	Good dry wine,	do. R. B.	J. Resor.
R. 7.	Good,	do. do.	do.
M. C. 1843.	Best new wine, will be superior with age,	do. do.	J. E. Mottier.
S. E.	Not good,	French Wine,	A. Owen.
B. H.	Good dry wine, but supposed to be foreign.	German Wine,	Mr. Brachman.
C. A. No. 8.	Medium quality, resembling Hock.	Hockheimn,	N. Longworth.
No. 3.	Good strong wine,	1830, Catawba,	do.
No. 7.	Not American wine,	Spanish Manzinello,	do.
German Label.	A good wine, but not the best,	1830, Catawba,	do.
R. F. No. 1.	Inferior, a foreign wine,	Old Hock,	Dr. Rehfuss.
No. 2.	Good, about equal to No. 4,	1839, Catawba,	N. Longworth.
C. A. No. 4.	Good, about equal to or better than No. 8,	1837, do.	do.
" No. 6.	Good, considered by some better than No 8, by others not so good,	1837, do.	do.
" No. 1.	Inferior to No. 8,	Catawba,	do.
S. F. 1.	Very good, resembles Manzinello,	Spanish, [skins,	S. E. Foote.
N. 60.	Good Cape wine, very ripe,	Cape, not fermented on	N. Longworth.
" 70.	Very good, resembling Madeira,	Cape, ten years old,	do.
" 50.	Old wine, but indifferent,	Lenoir, on the skins,	do.
No. 40, N.	Poor, fermented on the skins,	Ohio Grape,	do.
No. 10.	Not liked, supposed to have been injured in the bottle,	Mo., 1841,	do.
No. 3, M.	New and good Catawba,		do.
No. 34, M. C.	Very good Cape,		do.
No. 37, " "	Good, but not equal to the preceding,		J. E. Mottier.
No. 35, M.	Good, better than No. 34,		do.
No. 44, M. C.	New Cape,		do.
No. 2. 2d.	Good old wine,		do.
No. 41, C.	Very good Catawba, resembling Rhenish more than any other,		N. Longworth,
No. 1. 2d.	Tolerably good,		do.
No. 34.	Very good, old,		do.
	Do. do.		Dr. Smith.
	Good new, not in a suitable state for judgment,		do.

The judgments pronounced and recorded in the foregoing table, were as nearly unanimous as can ever be expected among so many judges. It will be seen that several of the specimens were foreign wines, included probably to test the connoisseurship of the committee; it will also be seen that the committee stood the test reputably. The result of the examination is a conviction on the part of the committee, that our soil and climate are well adapted to the production of a very fine, delicious wine; and that the Catawba grape is the species which yields the finest qualities. It will be seen that the greatest number and variety of the specimens examined were from the several vineyards of N. Longworth, Esq., who has been longest engaged in the cultivation of the vines, and in perfecting the manufacture of wine. Mr. Mottier, and Jacob Resor, Esq., who have lately acquired a good reputation in this department of horticulture, were next to Mr. Longworth in the number and variety of specimens furnished. These, with the single specimens of Dr. Flagg, and the two specimens of Dr. Smith, confirm the opinions of the committee, that the pure juice of the grape, when judiciously managed, will furnish the finest kind of wine, without any addition or mixture whatever; that no saccharine addition is necessary to give it sufficient body to keep for any length of time in this climate. In confirmation of this opinion, we would state that two of our German friends who were present, informed us that they had taken, on different occasions, specimens of the wine of this county to Germany, and submitted them to the judgment of various connoisseurs in that country, by whom they were highly approved—the principal, or only objection being, that they were too strong to compare with the fine kinds of the lightest German wines. A taste for the wines of this region appears to be well established, since all that can be produced finds a ready market at good prices; and the committee are of opinion, that the period is not distant when the wines of the Ohio will enjoy a celebrity equal to those of the Rhine.

D. B. Lawler,
S. F. Foote,
M. Flagg,
Jacob Resor,
Elisha Brigham.

Durham Oxen.

It may be new to many to learn the particulars of the best ox ever bred in England. This wonderful animal, commonly called the Durham Ox, or Day's Ox, I saw several times, and knew the owner, Mr. John Day, well. The said Durham Ox was sold to Mr. Bulmer, of Harnley, near Bedale, for public exhibition, at the price of £140; this was in February, 1801; he was at that time computed to weigh 168 stone of 14 lbs., his live weight being 252 stones. Mr. Bulmer having obtained a carriage for his conveyance, travelled with him five weeks, and then sold him and the carriage at Rotherham, to Mr. John Day, on the 15th of May, 1801, at £250.

On the 21st of May, Mr. Day could have sold him for 500 guineas, on the 13th of June, for 1000 guineas, and on the 8th of July, for 2000 guineas. Mr. Day travelled with him six years through the principal parts of England and Scotland, till at Oxford, on the 19th of February, 1807, the ox dislocated his hip-bone, and continued in that state till the 15th of April, when he was slaughtered; and notwithstanding he must have lost considerably in weight during those eight weeks of great pain and illness, his carcass weighed, at 14 lbs. to the stone, four quarters, 165 stone, 12 lbs.; tallow, 11 stone 2 lbs.; hide, 10 stone 2 lbs. At eight years old this wonderful animal weighed, alive, 83* cwt. 3 qrs., the greatest weight ever known; he girthed in the least place, behind his shoulders, 11 feet 1 inch.

This large, handsome ox, brought the Durham cattle into such a high repute; nay, this ox speaks volumes in favour of even a single cross of this blood, for the ox was the produce of a common cow, which had been put to Favourite, at five years old. This single cross striking the admirers with amazement, what a great mistake there has been in not crossing all coarse beasts in Great Britain and Ireland with the pure Durhams! I have no doubt but the Dutch cattle, and most other foreign beasts, will be crossed with them, which will not only put some fat on their backs, but will marble their lean meat with fat, and make them more suitable for our roast-beef-eating metropolis, London, the best and greatest mart in the world.—*Mark Lane Express.*

To Perfume Clothes.—Take of oven-dried best cloves, cedar and rhubarb wood, each one ounce, beat them to a powder and sprinkle them in a box or chest, where they will create a most beautiful scent, and preserve the apparel against moths.

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* There is doubtless an error in this weight—we give it as we find it in Skinner's Journal of Agriculture.—Ed.

For the Farmers' Cabinet.

Magnesian Lime.

Mr. Editor,—A by-stander during the Magnesian war, so long and ably waged in the pages of the Cabinet, but bottle-holder to neither party, requests a small space in your useful miscellany, for the following extract from the English Agricultural Magazine for June. Yet it is with no desire to stimulate the belligerents to another trial of strength that I point your correspondents Messrs. Kinzer, Webb, Van Leer, and Lewis, to the subject; conceiving, however, that some one will be able to account for the fact—if fact it be—that magnesia is necessary to the growth and full developement of the potatoe crop, and thus open a way to the solution of the problem, if so it might be termed, "Why is it, that in this part of the country we cannot grow such large crops of potatoes as are raised in the Eastern States, or in England?"

By the way, might not magnesia be found a cure for the potatoe plague? Here, then, follows the extract from the Agricultural Magazine, with which I take my leave.

D. L.

Delaware county, Pa.

"The top-dressing of potatoes with nitrate and sulphate of soda, which has produced such admirable effects in Scotland, has given more promise than profit in an experiment in our own neighbourhood; the plant running up green and rank without proportionate root. The general result of the experiments show, that they require magnesia, and when this is not contained in the soil, *or in the lime employed*, it must be added. Twenty-eight pounds of sulphate of magnesia to the acre, seems to be enough; or five gallons of bittern from the salt-works, may be equal to that quantity."

Farming Scenes at the West.

About eight years ago, a raw dutchman, whose only English was a good natured yes, to every possible question, got employment here as a stable-man. His wages were $6 and board; that was $36 in six months, for not one cent did he spend. He washed his own shirt and stockings, mended and patched his own breeches, paid for his tobacco by some odd jobs, and laid by his wages. The next six months, being now able to talk good English, he obtained eight dollars a month, and at the end of six months more had $48, making in all for the year $84. The second year, by varying his employment—sawing wood in winter, working for the corporation in summer, making garden in spring, he laid by $100, and the third year $125, making in three years $309.

With this he bought 80 acres of land. It was as wild as when the deer fled over it, and the Indian pursued him. How should he get a living while clearing it? Thus he did it. He hires a man to clear and fence ten acres. He himself remains in town to earn the money to pay for the clearing. Behold him! already risen a degree, he is an employer! In two years' time he has 20 acres well cleared, a log house and stable, and money enough to buy stock and tools. He now rises another step in the world, for he gets married, and with his amply built, broadfaced, good natured wife, he gives up the town and is a regular farmer.

In Germany he owned nothing and never could; his wages were nominal, his diet chiefly vegetable, and his prospect was, that he would be obliged to labour as a menial for life, barely earning a subsistence, and not leaving enough to bury him. In five years he has become the owner in fee simple of a good farm, with comfortable fixtures, a prospect of rural wealth, an independent life, and, by the blessing of Heaven and his wife, of an endless posterity. Two words tell the whole story—Industry and Economy. These two words will make any man rich at the West.—*Indiana Farmer and Gardener.*

For the Farmers' Cabinet.

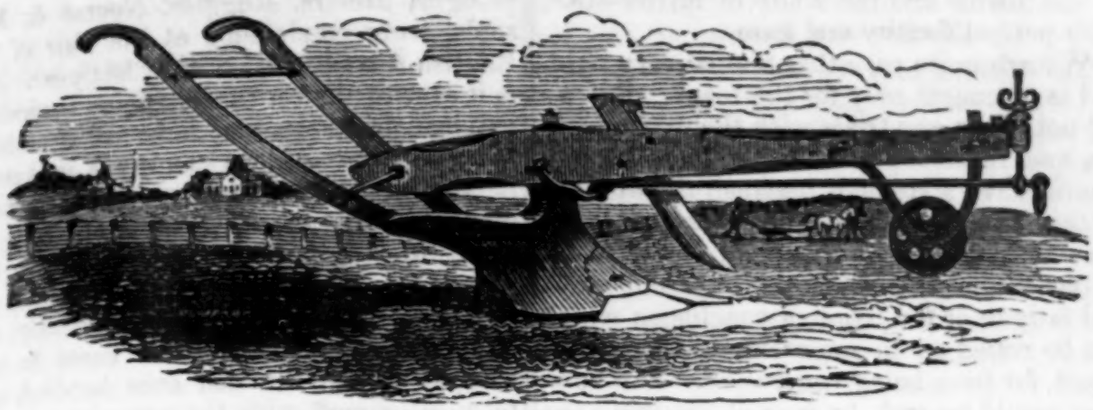
Trap for Cut-worms.

To the Editor,—A man farming for me on shares, thought the cut-worms very thick this season, when he was planting corn. He gathered the leaves of what is generally called swamp cabbage, and placed several about in the corn-field; on examining under them a day or two after, he found under one leaf 42, under another 35, and under a third, 32, well grown cut-worms. The leaves were partly eaten up. Upon examining them myself a few days after, I found the worms had eaten the leaves all, except a part of the stem. I believe they are very fond of such *food*, and that persons having small fields, particularly near where this cabbage grows, would do much to save their crop, by placing a number of the leaves among the corn. If the worms are fond of them let them have as much as they want, as they are but little worth for any other purpose; and if any person wishes to kill the worms, he could not ask a better trap.

Thomas Wood.

Steeleville, Pa., 1845.

Agriculture may produce health, wealth, and happiness.



THE CENTRE-DRAUGHT PLOUGH.

From the Cultivator.

Trial of the Centre-Draught Ploughs.

Mr. James Pedder, general agent for the sale of Prouty & Company's *Centre-draught Ploughs*, brought to this city in May last a number of these implements. They being comparatively but little known in this vicinity, several persons were desirous that a public trial should be made with them under the supervision of a judicious and impartial committee. This was more especially wished, as an unfavourable report had reached this country in regard to the performance of this plough, and that of Messrs. Ruggles, Nourse and Mason, at the exhibition of the Royal Agricultural Society of England, last year. The work of the American ploughs at this trial was represented as *decidedly bad*—a result for which we are wholly unable to account, except on the ground of the ploughmen not being well acquainted with the somewhat peculiar construction and operation of these ploughs. We have seen the operation of several of the most celebrated English and Scotch ploughs, which have been brought to this country, among which we will name that of the celebrated *Ransome* plough, which received the highest prize at the English trial referred to. With the exception of this, we are confident we have seen no imported plough, which, every thing considered, can be deemed equal to the American ploughs mentioned. The Ransome plough which we saw, was imported a few years since. It is unquestionably a good one. Some late improvements are said to have been added, of which we cannot speak. We know not what would have been the result of a comparative trial of this with the best ploughs made in this country; we however hope that such trial will yet be made—but at present we can only express our concurrence generally with the conclusions of the committee in regard to the work of the Centre-draught Plough, as set forth in the following report:

REPORT OF THE COMMITTEE.

We whose names are underwritten, were solicited to examine the Centre-draught Plough and witness its performance, at the farm of T. Hillhouse, Esq. The performance of this duty was certainly far from being courted by any one of us. But having been selected for that purpose, it would have been uncourteous to have declined; and having performed the duty, it is incumbent upon us to report the result of our examination. We have no desire, we must state in the outset, unduly to magnify the Centre-draught Plough, nor to praise unduly its performance. Neither can we be prevailed upon—even if desired so to do—to undervalue all or any of the various new and improved ploughs now before the agricultural community, which are brought in competition with it. But we nevertheless willingly report truly and fairly the facts in the case.

The committee are almost strangers to each other—inhabitants of different parts of the State—chiefly, if not entirely, practical men, and accustomed to use—and perhaps prejudiced in favour of—other ploughs. Yet, with entire unanimity, we concur in the opinion that the Centre-draught Plough is not surpassed by any plough with which any of us are acquainted. The work performed by it is equal in excellence to any thing we have ever seen, and performed with as little labour and fatigue by both ploughman and team, as it could, in our opinion, possibly be done.

Perhaps nothing more than the above need be said, as it comprises in general terms all that we can say, or that it can be desirable to say. However we will add:

This plough can be adjusted with the greatest nicety, both as respects the depth

of the furrow and the width of furrow-slice, with perfect facility and ease.

We are quite sure that it runs very light, and is of course easy for the team. But we did not make any trials with the dynamometer, and therefore are unable to make any comparative statement between the draught of this plough and that of others. All we pretend to offer upon this point, is the result of our observation upon the apparent effort and fatigue of the team; a conclusion which can be relied on to some extent, though we admit, far from being conclusive. We however would remark, by way of fortifying our opinion, that at the celebrated trial of ploughs made at Worcester a year or two since, this plough bore off the premium of one hundred dollars, after a very severe competition with some of the most celebrated ploughs. So far as the ploughman is concerned, we can with certainty assert, that severe labour and strenuous effort on his part, are almost entirely done away. Even skill is comparatively useless in working with this plough.

This may seem a strong position to take; but in confirmation of it we must state, that we saw furrow after furrow ploughed with great nicety, the hand of the ploughman having been laid to the plough only to enter it at the commencement of the furrow. As to the style of work performed, we can only say, that some of the ploughs lap the furrow-slice—and they are those which we prefer—and to which our report mainly refers, while another—the one to which the one hundred dollar premium was awarded at Worcester—turns the furrows flat.

The workmanship of the plough is excellent, and we beg specially to commend the casting of the share from a composition which is much harder than ordinary cast-iron, thus ensuring a great degree of durability to the ploughshare. If to this it be added that the share is also constructed upon the self-sharpening principle, it can easily be conceived that the purchasers of these ploughs are ensured against the too frequent recurrence of the vexation that results from the rapid and often *unexpected* wear of the share.

In conclusion, we would remark that this plough has obtained great celebrity, and has received and is daily receiving the cordial approbation of men whose opinion have far greater weight than ours. We believe that it has lost none of its celebrity by the trial which we witnessed, for out of the numerous company present, there was not one who did not seem to be both surprised and delighted with the performance of the plough.

It may be asked how it comes that both this plough and the Worcester county ploughs, Messrs. Ruggles, Nourse & Mason's, were condemned at the Fair of the English Agricultural Society last year. Nor is it easy to answer the question. Prejudice, national prejudice, may have had something to do with it. All we can say is, that some of the committee at least were practical men: we have reported only that which we saw. Moreover, there was present on the ground an English ploughman, recently arrived, whose judgment was perfectly unbiased, who pronounced this equal to any English plough he had ever handled, and fully concurred with the committee in the opinion expressed by them.

J. B. Nott, Albany Co.
T. Hillhouse, "
John McVean, Monroe Co.
C. Hannam, Genesee Co.

Prevention of Smut in Wheat.—It is stated on authority that it is believed may be relied upon, that wheat grown from seed which was thoroughly ripe before cutting, is much less liable to be affected with smut, than that grown from seed which has been cut earlier. Farmers who have adopted this practice, it is said, are seldom or never troubled with smut. To make the best flour, wheat is usually cut a little before its full maturity, and such is generally used for seed. This may be one cause of the extensive prevalence of smut, though there are unquestionably others. It is recommended to defer cutting the portion designed for seed about a week later than the rest of the crop, until the berry shall have become perfectly ripe. This measure of prevention is one which may be adopted with very little trouble, and is believed to be richly worth the trial.

We shall speak more fully of the causes and prevention of smut in our next.—*Michigan Farmer.*

To Cleanse Gloves without Wetting.—Lay the gloves upon a clean board, make a mixture of dried fulling-earth and powdered alum, and pass them over on each side with a common stiff brush; then sweep it off, and sprinkle them well with dry bran and whiting, and dust them well; this, if they be not exceedingly greasy, will render them quite clean, but if they are much soiled take out the grease with crumbs of toasted bread and powder of burnt bone: then pass them over with a woollen cloth dipped in fulling earth or alum powdered; and in this manner they can be cleansed without wetting, which frequently shrinks and spoils them.

Lightning Rods.

A Letter from Professor Hare to the Inquirer and Gazette.

Newport, August 16th, 1845.

DEAR SIR,—In the Inquirer and National Gazette of the 14th inst., it is mentioned that the barn of Mr. Detwiler, near Reading, was struck by lightning while furnished with a lightning-rod at the east end of the building. Although I can but ill spare the time, from other objects in which I am engaged, I am led to call attention to the sad consequences of this error of not putting up a conductor intended for the protection of any building against lightning, at the westernmost part, and preferably the northwesternmost end or corner. I am under the impression that all thunder-gusts, in this part of the world, come from the westward, and generally from the north-westward. We have sometimes storms from the south-east, accompanied by diffuse electrical flashes, but such genuine thunder-*gusts* as produce dangerous discharges of concentrated lightning, agreeably to my observations, come always as above stated. Being consulted about ten days since, by the proprietor of a house, respecting the proper mode of putting up a lightning-rod, I advised that it should be secured to the north-western chimney, so as, while duly pointed, to extend about 10 feet above it. Had Mr. Detwiler put up a rod, *well pointed above and properly terminated below*, at the north-westernmost part of his barn, I am of opinion that it would not have been struck. I advance this opinion conditionally, because a lightning-rod is competent as a conductor of electricity only so far as it terminates in contact with a conducting medium capable of diffusing into the earth any electricity which may be presented to it. Unfortunately the conducting power of the soil in which these rods usually terminate, is due only to the moisture which it naturally holds; while according to Cavendish, the conducting power of water itself, is two hundred thousand times less than that of iron. It follows that an iron rod, when terminating in *dry* earth, is wholly incapacitated from acting as a conductor. It is like a pipe plugged at the lower end. Even when the soil is moist, the rod cannot receive more electricity than the soil can carry off from it. Hence under ordinary circumstances, the competency of lightning-rods is dependent on the pointed form given to the upper end, which prevents the electricity from being received above in greater quantity than it can get off through the soil below.

Lightning-rods should always be made, if possible, to terminate in the nearest spring or stream of water, whether at the bottom of a well or the surface of the earth; it being excepted that in cities, where there is an extensive ramification of metallic pipes, for the conveyance of water or gas, a connection with such a ramification is to be preferred to any other termination.

In the case of vessels employed in navigation, where the bottom is coppered, an attachment to the sheathing by solder, is the best termination possible; but where there is no sheathing, a sheet or strip of copper, so situated as to be always under water, may be resorted to.

From the immense conducting power of the metallic chimney, and the necessary connexion of the machinery with the water in which steamers float, I cannot conceive that they are liable to be injured by electrical discharges, unless in the form in which they produce tornadoes.

You will perceive that I have said more than my premises would warrant, but I hope what I have added may carry with it sufficient apology, in the desire by which I have been actuated to promulgate information respecting the means of avoiding an awful source of human calamity.

I am, Sir, yours with esteem,

ROBERT HARE.

The Strawberry Plant.

I YESTERDAY, for the first time, met with Mr. Downing's work on fruit. I doubt not it will be a work of great value. I discover from it, that I have erroneous opinions respecting the character of the strawberry plant. I was not, like Mr. Downing, "born in a large garden, on the banks of one of the noblest rivers in America," and therefore "claim a natural right to talk about fruit." But I have resided for forty-one years, on the banks of La Belle Riviere—the Ohio—at the then village of Cincinnati, now the Queen of the West, and destined in less than half a century, to be the second city in the Union. Thirty years of that time have been devoted in part to horticulture, and I have paid particular attention to the character of the strawberry plant. If I am wrong, I am without excuse, and should pay for my error.

It seems, according to Mr. Downing, that all strawberries in their *natural* state, have blossoms perfect in both the male and female organs. Of course, all new seedlings have perfect blossoms. But it seems, in rich soils, a *few* of the runners will become defective in the male or female organs, and be

unproductive. That perfect natural plants, of all the varieties, are abundant, and you have only to select your plants from these to have abundant crops, and not cumber your ground with staminate plants. My doctrine is, that in 10,000 seedlings, there would be about an equal quantity of male and female (staminate and pistillate) plants, and that it would be a strange occurrence, should a single plant be found perfect in both organs. With the exception of the white and monthly varieties, I have met with one plant only, perfect in both organs. Its fruit is small. That even an acre of Hovey's fine seedlings, will not by themselves, produce a single perfect fruit. It is time this subject was settled, for if my impressions be true, though our Queen city may be second to New York in population, she will be the only city where strawberries can be sold at a price to bring them within the reach of the poor. No cultivator will be able to take 125 bushels in one day to her market. True, I did not go to the far West *for poverty*, I *had a plenty of that in my native town.* Still I feel a deep interest in the poor, and would risk something to bring this delicious fruit within their reach. I propose that Mr. Downing select a dozen perfect plants from each of the twelve following varieties described in his work. Bishop, Grove-End Scarlet, Hudson, Large Early Scarlet, Methven Scarlet, Black Prince, Brewer's Emperor, Elton, Hovey's Seedling, Myatt's British Queen, Myatt's Pine, and Myatt's Deptford Pine. Most of these are new kinds, and never seen by me. Mr. Downing has seen them, and can the better judge. Let these be sent to Mr. Jackson, an intelligent horticulturist, in the vicinity of Cincinnati, who will take a pleasure in making the experiment. Mr. Downing, if he wishes, can name another person to overlook the plants. These twelve varieties Mr. Jackson will plant 100 feet separate from each other. He will leave, when growing, one plant only of each. That plant may be increased by runners. For each variety that produces a full crop of perfect fruit, I will pay $50 to Mr. Downing, to be applied as he may wish. For each kind that does not produce a full crop of perfect fruit, he is to pay me $50, which I will apply to some public charity. Should the experiment cost me $600, I shall deserve it for my temerity and ignorance. Should it cost Mr. Downing that sum, a belief in my views, and a corresponding cultivation, will reduce the price of strawberries to four cents per quart. Should Mr. Downing not incline to accept this proposition, I trust the President of the Massachusetts Horticultural Society, will bring the subject before them, and have the question fully settled. Mr. Hovey deems his seedlings what Mr. Downing calls a natural plant and uniform bearer. Yet I believe a different opinion prevails at the garden of Messrs. Hovey. Mr. Hyde, an intelligent horticulturist, in the vicinity of Boston, informed Mr. Ernst, when he was in Cincinnati, that when he bought Hovey's seedling at their nursery, he was told it would not bear, except in the vicinity of other varieties.

To induce market gardeners and others to make the experiment, I would state, that I have paid particular attention to this plant for thirty years. In the fields in this region, fifty years since, the plant was abundant. Barren patches were common in the field, but I was not then aware of the cause. Of late years I have examined them. There are staminate plants so defective in the female organs, as never to bear even a defective berry. Others are so far perfect in both organs, as to produce a half crop of fruit. The pistillate plant is so defective in the male organs, as never, except impregnated by a plant near, to produce a perfect fruit. As a general rule, where the staminate plant produces any fruit, it is the richer of the two. For the better understanding of those ignorant of botany, I am in the habit of designating them as male and female. The strawberry belongs to the class of plants that has the male and female organs in the same blossom, and I have never seen a white or monthly variety in which both organs were not perfect. Of the scarlet, I have seen one variety, and one only, that is perfect in both organs; and every blossom produces a small, high flavoured perfect fruit, unless injured by late frosts. Neither the staminate nor pistillate plant, changes its character by cultivation. The partially bearing staminate plant, will bear better some seasons than others, and, I doubt not, a greater portion of pistillate organs may be forced out than usual, by forcing in hot beds. It is this character of the strawberry plant, that renders botanists slow of belief. Yet, it should not, for the discovery is not of modern date. It was noticed by some of the disciples of Linnæus, and he scolded them for it, advising them to examine closely the plant before committing themselves, as he presumed the plants they called staminate and barren, were blossoms killed by the late frosts. Duhamel and all who have written expressly on this plant, since the days of Linnæus, have advanced the same doctrine, with the

exception of Harper or Harvey,* who wrote the results of the London Horticultural Society's classification of the different strawberries cultivated in England. He is silent on the subject of staminate plants, and appears to have had as little practical knowledge of the character of the plant, as he had of the Hebrew psalter.

From the prairies of Iowa, I have twice had strawberry plants sent me with the same result. There were both staminate and pistillate plants. The fruit of the latter was very small, and never produced a single berry, unless impregnated by other plants. The staminate plant, in favourable seasons, will perfect half its blossoms; in others, but few. The fruit is a light scarlet, and where it perfects but three or four berries to the plant, the fruit will measure upwards of four inches. If used for impregnation, it requires constant watching. It is of such vigorous growth, that if but one plant were planted to fifty pistillate plants, it will in two years root out the others. For twenty years I kept patches of the staminate and pistillate Hudson strawberry, in separate departments, to set new beds from, so as to be certain not to have too many barren plants. Neither bed ever produced a single fruit, unless as a matter of curiosity, I placed a single plant of the latter by the former, when a certain portion were always impregnated, and bore perfect fruit. When in blossom, the plants may be distinguished at the distance of 20 feet. Our market gardeners can distinguish them by the stem and leaf. In raising from seed, I have had about an equal quantity of staminate and pistillate plants. Not one in fifty of the former would produce a single berry. I have raised thousands in a single year, but I never raised one of what Mr. Downing calls a *natural* plant; not one in which both organs were perfect in the same blossom. I never saw a pistillate plant, separated from all others, bear a perfect fruit. Hovey's very superior seedling, by itself, as obtained by us, in the West, from his nursery, and from others, never bore a perfect fruit. I saw a like bed of it in this place, with many defective berries, but not a single perfect fruit. I have seen this the case on the banks of the Ohio, where there were one and a half acres of this variety. The bed had been set out the fall previous, and a press of business had prevented the gardener from putting out male plants. Had he done so in the fall, even one to twenty, they would have had possession of near half his ground. The elder, Mr. Prince, more than twenty years since, conversed with me on this subject. He was aware of the existence of barren plants, which he designated as blind plants, and the necessity of having one blind to ten or twelve bearing plants; but the blind plants so speedily rooted out the bearing vines, that he was impressed with the belief that the bearing vines produced a portion of blind plants in running. In raising seedlings, it is a matter of great importance to be able to distinguish the staminate from the pistillate plant, before running; to cut them out, as they will before the plants are fruited, root most of the pistillate plants out. Is not Mr. Downing under a mistake in describing the Hudson as a *necked* fruit? This is one of our largest, best flavoured, and most productive strawberries, where male plants are interspersed. I have known it well for fifty years, in New Jersey, Philadelphia, and Ohio, but never saw one with a neck. On the contrary, the stem and hull are so much imbedded in the fruit, that it is difficult to separate the fruit with the fingers. The strawberry cultivated in England under this name, and said to have been received from New York, is described as a *necked* fruit, and I presume Mr. Downing has taken the description from English works, and not personal observation. I wish to draw his attention to it, that he may correct the error, if he be in error; for where its *pistillate* character is understood, it is the most valuable to cultivate for market. In the spring of 1844, a single wild staminate plant was brought me, from a field in Kentucky. This spring I sent it to our Horticultural Society, with 200 hundred perfect berries. Separate from staminate plants, it would not have produced even an imperfect berry.

In justice to Mr. Downing's views, I should say, I have never met with an English or Scotch gardener who would even admit the existence of plants not producing a full crop of fruit, from a defect of organs. When I have in their own gardens pointed out ten staminate to one pistillate blossom, the former all barren, and the latter with perfect fruit, they gave a shrug of the shoulders—said they had never before noticed the difference in the character of the blossom, and that no such difference existed in Europe. Mr. Buist, the intelligent horticulturist of Philadelphia, denied my principle, certainly so far as Kean's seedling was concerned, as it yearly never failed to produce a full crop of large fruit. He showed me a full bed, then opening its blossoms, which were all pistillate plants, and not the true Kean, which is a staminate plant, and so figured in their publications, and so seen

* My memory does not serve me certainly of his name.

by me at Mr. Cushing's. I told him they could not produce any perfect fruit. He assured me they had never failed. A few feet distant I found another bed, in which nearly all were staminate plants, and which he told me was the Hudson. I pointed out to him in that bed, male plants, amply sufficient to impregnate all his Kean. He then observed, to be certain, he had planted a bed of them separate from all others. These I examined, and we agreed to be bound by the result. He wrote me one month thereafter, that the fruit in the first bed shown me, was all perfect, whilst the separate bed had not a single perfect fruit.

I imported the same variety from England, under the name of Kean's seedling. It is a hardy vine, a great bearer, the fruit large and well flavoured. It is a much more valuable variety than the genuine staminate Kean, which produces a partial crop only, of large fine fruit; and a late English writer says it is now but little cultivated, being found unproductive. It is a valuable kind for forcing, but of little value for general culture. N. Longworth.

Newark, N. J., July 10th, 1845.

For the Farmers' Cabinet.

Maryland Marl.

Mr. Editor,—Having had some experience in the application of green-sand marl to poor and worn-out, and thrown-out, lands for the last four years, I have thought that as I have benefited by the experience of others, others might possibly have some claim to be benefited by mine. I purchased a farm of 400 acres—300 arable—which was most deplorably out of order, and situated near the head of Sassafras, Maryland. I got possession in January, 1840. I gave $8,500 for it. I went immediately to work and surveyed the farm, laid off, and fenced the fields, garden, yards, lanes, &c. Built a large barn 82 by 45 feet, with a building in front 48 by 27 feet, for cribs, horse-powers, &c., and roofed and repaired the house. These things together consumed the first two years. Having made these preliminary remarks, I will now try in my bungling way to give you some of my experience in the application of marl, and if you think proper to publish it, you can do so—if not, commit it to the flames, and no harm will be done. Having been a subscriber to the Cabinet nearly from its commencement, I read much of the wonderful effects of marl in New Jersey, and in Delaware, my native State. Being aware there was something like it on the farm in question, although I had little or no faith in it, as my neighbours there said, I concluded to give it a fair trial, for the former owner, Charles Thomas, Esq., had used a few loads a number of years before as I was informed, and with good effect. In the summer of 1840, I sowed the headlands of the corn-field with buckwheat, and applied one ox cart-load of marl, spread evenly on the ground immediately after the buckwheat was sown and harrowed, and to my astonishment, before the buckwheat had been up two weeks, I could see very plainly the difference where the marl was and was not put. Well, sir, this raised my curiosity much, and set me to examining the accounts of it in the Cabinet—how it was applied; what quantity to the acre, &c. In the following winter, 1840 and '41, we opened a pit and covered about 15 acres of young clover, at the rate of two to three hundred bushels per acre, and its action was so sudden, that it showed very plainly immediately on the opening of the spring; and when harvest came there was a good swarth, and some places lodged, to the very spot where we left off marling; and where there was no marl there was little or no clover, although all was well plastered. Well, now I began to think I had found a gold mine indeed! Ah! said some of my neighbours, it will help your buckwheat and clover, but it will do nothing else any good. My answer was as every experienced man's would have been—if it will make clover grow luxuriantly, that is all I want. Only enable me to raise plenty of clover, and I will risk the wheat and other crops. I began now to think about going to work at the marl in earnest, and I first thought if I could cover a field every year at slack times, we would do pretty well; but I soon found these slack times never came, so I hired a man to remove the earth off the top, and a second to drive a two-horse team, which was appropriated to hauling marl altogether, and in about two years we had our farm well marled all over, and some of it a second time; and the effects have been almost incredible. In the summer of 1842, I broke up part of an old sedge field, that was so poor that it had not been tilled for a number of years, gave it a top-dressing of marl—let it lay until September—stirred it again—sowed Mediterranean wheat—harrowed it in, and I cut a good crop the next harvest; and a good crop of clover the succeeding harvest; and the next, this last harvest, another crop of wheat much better than the first, without any other application except plaster, and so we go ahead. I raised last year about 1,600 bushels of wheat, and about the same of corn, and clover in abundance; and this

year our wheat crop will be near the same, and the corn a much larger crop, from two to three thousand bushels; say 2,500 bushels from sixty acres. Remember, this is on a farm that was so poor that the former owner sowed no wheat for a number of years before he sold:—all told with the application of plaster and marl, and no mistake. Last fall I purchased another farm, 353 acres, adjoining the one spoken of, and we are going ahead with it as we did with the first; having a son on each farm, working-men of the right stamp, I trust we will continue to go ahead, if Providence is pleased to bless and prosper our efforts as heretofore. The marl spoken of, lies high and dry on the bank of the Sassafras river, and raising with the bank at an angle of about 45 degrees, it is from six to thirteen feet thick, when it comes to a level on the top; and so far as we have operated, there is from none to 13 feet of dirt on the top, which we wheel off with a wheelbarrow and tumble it into the river, where there is a breast of 10 or 12 feet. The colour varies much; the top is generally green—some stratas dark brown; some brighter; some pale green; some dark, or blue-black, &c.; but it is invariably black, or blue-black, in the bottom. In one place where the bottom was very dark it smelled of sulphur, and when dry on top, a white crust forms, tasting strong of alum: this last injures vegetation when put on heavily. When we first opened the pit there were some large shells resembling clams, and thousands of small ones, about the size of the thumb-nail, entirely round, but in working further in they disappeared, but the prints of them show here and there all through the mass. I have had it analyzed by Professors Booth and Boye, of Philadelphia, and they say the principal fertilizing quality is potassa; it contains from four and a half to five and three-quarters per cent. of potassa, with smaller portions of lime and magnesia.

Respectfully,

JOSEPH GRIFFITH.

Newark, Del., Sept. 1st, 1845.

Tests of a thriving Population.

CHARLES SMITH, in his Tracts on the Corn Trade, estimated the population of England and Wales in 1760, at 6,000,000, which is sufficiently near the truth for our present inquiry. The entire consumption of grain at that time, he estimated to be 7,566,350 quarters; of which 3,750,000 quarters were wheat, and of the remainder 1,026,125 consisted of barley, 999,000 of rye, and 1,791,225 of oats.

The change which has taken place in the species of grain used for bread in England since the period referred to by Charles Smith, is notorious. Rye has almost entirely ceased to be employed. The same remark might almost be applied to barley; and oat meal and oat cake are not consumed to any thing like the same extent as in the previous century. Almost every individual now uses wheaten bread; and in some of our manufacturing towns, the inferior sorts even of wheaten flour have been rejected by all except the most indigent classes.

The total average produce of grain in England and Wales, has been estimated, within the last ten years, at 29,450,000 quarters; of which 12,450,000 quarters consist of wheat. (M'Culloch's "Statistics of the British Empire," i. 529.) It would thus appear, that whilst the population of England and Wales has doubled, the consumption of wheat, as well as of other grain, has nearly quadrupled; for the home producer is unable to supply the demand of the consumers, and an annual average of at least 500,000 quarters of wheat may be added to the total quantity produced at home, on account of foreign importations.

Test by Butcher's meat.—In a similar manner, in regard to butcher's meat; if we take the market of the metropolis, we shall find that the number of cattle and sheep annually sold at Smithfield, has doubled within the last century, whilst the weight of the carcass has also more than doubled in that interval. In the early part of last century, 1710, according to an estimate made by Dr. Davenant, the nett weight of the cattle sold at Smithfield, averaged not more than 370 pounds, whilst calves averaged about 50 pounds, and sheep 28 pounds. In 1800, the nett weight of the cattle was estimated at 800 pounds; of the calves at 140 pounds; of the sheep at 80 pounds.

Again, in 1742, we find 79,601 head of cattle, 503,260 sheep, to be the numbers sold at Smithfield; in 1842, the numbers had increased to 175,347 cattle, 1,435,960 sheep. According to the calculation which M'Culloch adapted for the amount in 1830, when he sets down 154,434,850 pounds for the supply of butcher's meat required in London, if we assume the population to have then amounted to 1,450,000 exclusively of some suburban districts, we should find the average annual consumption of each individual to be very nearly 107 pounds.

The returns obtained by the Statistical Society of Manchester, as to the cattle sold in the markets of that town, furnish an annual consumption of not less than 105 pounds of butcher's meat for each inhabitant. In

Paris, on the other hand, the quantity has been estimated by M. Chabrol, from 85 to 86 pounds per head; and in Brussels, it is supposed to average 89 pounds. We thus find that the consumption of animal food in the towns of England, far exceeds that of foreign cities; and as this consumption has gone on steadily increasing, we are warranted in concluding that the labour of the English people is not only more efficient as compared with that of other nations, but is daily acquiring greater efficiency, if the present be contrasted with previous results.

The following curious fact of speculative science applied to trade, is from the appendix, and has been furnished to Dr. Twiss by Mr. Dixon, an eminent land surveyor at Oxford:

"The present mode of calculating the probable yield of wheat of a given district for the coming harvest, is as follows: About the time that the wheat is blooming, generally about the beginning of June, a person will go round with a guage secreted in a hollow cane, which forms a triangle when opened, and represents a certain portion of an acre of ground. This is placed over various portions of the standing crop in the best and worst parts of a field: the number of ears of wheat comprised within the triangle is counted, and the probable quality of the grain is taken into calculation according as the spring has been wet or dry. On the former supposition the grain is likely to shrink; on the latter, to harden and come out plump. It may be observed, that if there has been a good general rain during the last ten days of April and the first ten days of May, on the average, no more wet is required for wheat. An expert gauger will form a very accurate estimate of the probable produce of a given district by this method."—*Foreign Paper.*

For the Farmers' Cabinet.

Memorandum of Experiments with Guano, on the Farm of Dr. Ellwyn, near West Chester, Pa.

April 10*th.*—Planted potatoes—Mercers—one bushel; put in the rows before covering them, equal parts of guano and plaster, at the rate of one and a half bushels to the acre. Strode's best whites alongside, planted and manured in the same manner—weather dry.

May 31*st.*—The frost last night killed the tops to the ground.

June 18*th.*—Potatoes spring up to admiration. I dressed them, and found those guanoed somewhat in advance of the others.

June 30*th.*—Observed a marked difference in the growth and colour of the tops of both kinds, but most particularly in Strode's whites. The weather has been wet for the last three days and nights.

August 1*st.*—Dug some of the Mercers, and found those guanoed much larger than the others.

April 16*th.*—Applied an infusion of guano to six rows of onions planted about a week previously—left three rows without. Also applied to head sallad—left a part without—weather dry.

April 26*th.*—I found that the quantity was too great or the weather too dry, or both, as about one half of them perished, and the remainder grew but poorly. I conclude, therefore, that to apply a large quantity is injurious.

July 1*st.*—The onions not grown well—most of them dwindled, and none of them flourished as well as those that had none applied.

April 17*th*—Appearance of rain. Experiment on grass in orchard east of the house. Sowed a part with equal parts of guano and plaster, left one cast without—then sowed with plaster alone. Orchard north of the house, sowed one part with equal parts of guano, plaster, and dry soil mixed through a sieve; the remainder of the ground with plaster alone, and about one acre of an adjoining field in like manner, and the remainder with plaster alone.

April 30*th.*—Took my neighbour, J. C. Strode, across the lots at right angles with the sowing, but did not inform him where either the guano or plaster began or ended; but he was able precisely to mark the difference in colour and vigor of the different casts. Took him to both the other lots, and he with equal precision, marked the same difference. There came rain about two days after sowing.

May 15*th.*—The same marked difference is still observable.

June 15*th.*—Mowed the orchard east of the house; found material difference in quantity where the guano was sown, it being much thicker at the bottom. The lot north of the barn was mowed the 26th of June, and the difference in favour of guano much more marked than the former. The lot north of the house was mowed on the 28th—in this lot the greatest difference appeared. I think there was three times the quantity on that guanoed, that there was where nothing was sown, and double the quantity of that sown with plaster alone.

July 1*st.*—This morning, after a copious rain, sowed two bushels, three parts dry soil

and one guano, on one acre clover ground that had been mowed ten days, and second crop fairly started; and at the same rate on pasture ground. The former was fresh grass, on ground that had wheat last year; the latter was an old sod of four or five years standing, the ground very wet. The guano and dry soil has been mixed for about six weeks, kept in a dry loft, and appear to have been well incorporated—result hereafter. Immediately after the sowing the weather became dry, and remained so for several weeks, and I have not been able to discover that the guano has had much effect, owing, as I suppose, to the extreme drought.

April 22nd.—Planted corn this day.—Steeped sufficient to plant twelve rows, in an infusion of guano, twenty-four hours previously: planted the remainder of the field with dry seed. That steeped in guano came up two to three days earlier than that which was planted dry. The ground was quite moist.

May 10th.—Found the worms were making sad work with the corn; and replanting, I found that which had been steeped in guano, had almost entirely escaped the ravages of the worm, and continues to this time—May 17th—decidedly ahead of that planted dry.

May 31st.—A heavy frost killed the potatoes to the ground, and the corn very much injured—weather dry, with cold nights—altogether discouraging.

June 5th.—Went through the corn with the cultivator, and planted pumpkins in the missed hills, and in going over clipped the dead leaves off.

June 10th.—Found that the corn notwithstanding the drought, revived and gave encouragement to hope that all was not lost that appeared in danger.

July 1st.—About one acre of corn much missed—the remainder of the field flourishing. I omitted to note the time of putting the guano on the corn, but think it was about the 20th of May; immediately after putting it on—one half plaster, the other half guano—the ground was dry and continued so for several weeks, and I am induced to believe it injured the plant. I found, in many instances, that the ends of the leaves were killed as with frost. That part steeped in guano, does not now appear much better than the other.

I sowed all the grass land except those lots of experiment, with plaster, at about one bushel to the acre.

May 1st.—Sowed about one and a half acres of grass in the corn-field, and four or five acres of pasture ground with guano mixed with dry soil—about one part guano and two parts soil, put together about two days previous to sowing. The guano emits a fœtid smell, so that it is almost beyond endurance to sow it, especially as it is a fine powder, and is more subject to the action of wind than plaster. My object, therefore, was to prepare it in such a manner that it could be sown with some kind of comfort, and mixing it with the dry soil succeeded; it seemed to incorporate itself with the soil, and thus lost much of the smell, and the dust was much more allayed than when mixed with plaster. If comfort in sowing be the object, I think this the best mode I have tried, but am inclined to think that mixing it with plaster, about equal parts, is the most effectual and most beneficial mode of application.

August 30th.—This application did not make much difference in the appearance until recently. The present month we have had much wet weather; the rain being frequent, but not heavy, except in one instance. From this circumstance, and information from those of more experience, I have arrived at the conclusion, that rain or moisture is altogether essential in promoting the benefit of guano, and that it will remain inactive until rain descends, whether the time be long or short.

July 16th.—This day sowed headlands around the corn-field, previously well prepared, with guano that had been mixed with dry soil, and remained in a dry loft for two months—one part guano and two parts soil, about two bushels per acre—mixed it well with the cultivator—left a small portion unsowed with guano—ground moist, weather dry, but like for rain.

July 28th.—Sowed the turnip seed,—ground moist—soon after came a hard rain, that washed the ground considerably. Since that time many gentle showers, and turnips look promising. There is quite a perceptible difference between that sowed with guano and that omitted. As the corn and turnips are yet to be gathered, I am unable to report the result. WM. EMBREE.

East Bradford, Sept. 1st, 1845.

New Seedling Strawberry.

C. M. HOVEY, Editor of the Magazine of Horticulture, has produced another seedling strawberry, which he calls the *Boston Pine*, and describes as possessing very valuable qualities. "The fruit, very large, roundish or slightly conical, always very regular in form: Color, deep, rich, shining red: Seeds imbed-

ded in a rather deep cavity: Flesh, pale scarlet, solid, fine grained, very juicy, sweet and rich, with a high and most delicious flavor: Footstalks, long and spreading, elevating the fruit from the ground: Flowers, large, and *perfect*, possessing both stamens and pistils: Leaves, large, of a lighter and duller green than deeply and sharply serrated: Vines, exceedingly hardy and vigorous. Ripe nearly as Hovey's Seedling, narrower, and much more early as the Old Scarlet or Virginia, filling up the season between that kind and Hovey's Seedling, when there is no other of equal merit.

"The sterile and fertile character of the strawberry has been a subject of much discussion in our pages, and no perfectly satisfactory result has been arrived at. But enough information has been elicited to show, that with some sorts there is a tendency to barrenness, when growing in a plantation away from other kinds. Let the causes be whatever they may, it is sufficient for all practical purposes, to know, that the most abundant crops can be procured by planting some sort abounding with *staminate* flowers, in the near vicinity of those which do not possess them: and whether soil,—climate,—cultivation,—injudicious selection of plants, or a normal defect in the organization of the flowers, prevent the production of pollen, a *certain crop* may be depended upon. Thus in a plantation of Hovey's Seedling, a single row of the Old Scarlet or Boston Pine, will fertilize a dozen rows of the former. We know of one gentleman who has raised *two thousand quarts* of Hovey's Seedling on a *single acre*, set out in this way, the present year. It is time and labor thrown away to cultivate sterile plants, as has been recommended by some individuals, when varieties, unusually productive and of large size can be planted out for that purpose. It is in this respect, that we view our new seedling as invaluable to every good collection of strawberries.

"We have given great attention to the strawberry, and cultivated all the varieties introduced for the last twenty years, and proved nearly twenty sorts the present season. Of the whole number, however, there are only *four* which can be recommended for general cultivation. Others will do for the amateur, who minds not time nor expense to ensure their growth; but our object has been to produce fruit fit for the "million;" varieties which need not the fostering care of the gardener, or which heed the intense cold of our northern clime,—but such as with ordinary care may *always*, and in every soil, be depended upon for a crop. We started with such a purpose in view, and we believe it has been accomplished. Should an opportunity present, we hope to give an article, showing the comparative merit of the varieties we fruited the present year.

"The four varieties are the Old Scarlet or Early Virginia, the best and largest very early variety: the Boston Pine to succeed it, and in small gardens to take its place: Hovey's Seedling, and the common Red Wood. These will give a continued succession of splendid fruit of unsurpassed excellence, from early in June to the end of July, a space of two months; and when desired, with some care, the Alpine will prolong the season to October. The market affords the best test of the superiority of any kind for general cultivation. Let a comparison be made, of the supply, and the sorts, three years ago, with the past season. Keen's Seedling, imported in 1826, out of all the foreign kinds, was the only large one to be seen, and that exceedingly scarce. This year nearly the whole stock consisted of Hovey's Seedling, and Early Virginia, and the Wood: *three* cultivators alone sending to Boston market more than *four thousand five hundred quarts* of the former variety."

For the Farmers' Cabinet.

Meeting of Agricultural Society.

At a Stated monthly meeting of the Philadelphia Society for promoting Agriculture, held at their room September 3d,—K. Smith, Esq., Vice President, in the chair;—present 13 members.

One new member was elected, and two others were proposed for election at the next meeting.

A communication from William Embree, of Chester county, on experiments made with guano on grass, &c., the present season, on the farm of Dr. A. L. Ellwyn, was read and ordered to be published in the Farmers' Cabinet. An interesting statement was made by Mr. S. C. Ford, showing the value of guano and poudrette as manures, for corn, grass, &c., in which other members concurred.

A. Clement exhibited a very superior sample of white wheat, from the farm of Mr. Peter Wager, from seed obtained from Mr. R. T. Potts.

Mr. James Pedder brought to the room, a few uncommonly large and fine peaches, from the farm of Major Raybold, which were highly relished by the members present.

The Farmers' Cabinet will contain a statement of the products of the Messrs. Raybold's orchards, up to the last of August.

A. Clement, *Rec. Sec'y.*

For the Farmers' Cabinet.

Thaer's Principles of Agriculture.

Mr. Editor,—I design with your permission, to give to your readers some knowledge of a work published in Germany in 1844, entitled, "Principles of Agriculture," by Albert D. Thaer. They need be under no alarm that I shall impose upon them any thing not altogether practical. I know very well the caution with which farmers receive theories, or indeed any information which they cannot readily and immediately apply to their business. It is a fault and a misfortune, but as it is a feeling which exists too generally, and is far too strong to be resisted, and far too sensitive to be rebuked, I shall not venture to quarrel with it. But this work contains nothing not strictly practical; it is the result of the experience of a very intelligent man, whose life was devoted to the study and practice of agriculture, and although he was of a country towards which Americans, from the difference of language, customs, &c., very seldom turn for information, yet it is probable that such a man as he appears to have been, with a strong mind, earnestly engaged for years in a single pursuit, may, and ought to have struck out something of interest to his brother cultivators. Of this we shall be made aware, as we proceed in the examination of the work. It may be as well, perhaps, to encourage an esteem for the writer's opinions, and to give them all the authority possible, to say who and what he was. Thaer was a Hanoverian, born in the town of Celle, in 1752; he was the son of a physician, and educated for the medical profession; after practicing for some years, he retired and devoted the rest of his life to agriculture. He appears to have been an enthusiast, for though living at a time when Europe was convulsed by Bonaparte's ambition, and he himself in his peaceful occupation, was surrounded by the ring of arms, and was at length obliged to desert his country, yet he does not seem even for a moment to have thought of giving up his pursuit—having once put his hands to the plough, he looked not back. Honours were showered upon him from all parts of Europe; noblemen and princes sought his acquaintance; all men honoured him because he was useful. After a career of high merit, he died at an advanced age, in 1828.

I now propose to myself the pleasure of introducing to the readers of the Farmers' Cabinet, some of the ideas and modes of proceeding of this estimable person. As one of the most interesting topics to all agriculturists, I will begin with the chapter,

On Manuring the Soil.—Manures are of two sorts, those which nourish the plant by becoming, as it were, its food, and those which stimulate its growth by chemical decompositions and combinations. It is not easy to define the way in which each manure produces its effect; but it is very important that we should make the endeavour to discover it, as it is only by attaining or approximating towards the real effect, that we can appreciate its value or feel authorized to discard any particular manure, or to continue its use. But in making this attempt we strike upon one of the greatest difficulties in the management of land—the power of deciding as to the soils and manures that are fitted for each other. In a practical point of view there is no subject more difficult, and no knowledge more difficult to attain; for a long time, and time of great value to the farmer, may be wasted before he is enabled to say whether he is treating his soil in the right manner. It is true that all soils may contain the aliments necessary for every kind of plant, but they are not in equal proportions; for this reason one kind of land favours the vegetation of one kind of plant, and another some other kind of totally a different nature. And in this way it is a nice point in the management of land, to know what our land is fitted to produce, and what kind of manure is calculated for this particular product. Our author makes an important distinction between vegetable and animal manure. The first, he says, appears to act on plants solely as an aliment, while the last acts on the soil as well as on the plants which vegetate there. Mineral manures, lime, plaster, &c., which contain no organic bodies, and of course, nothing to be decomposed, act almost entirely by rendering those parts of the soil soluble, which were before insoluble, and by favouring and accelerating decomposition. The manures in common use, are composed partly of vegetable and partly of animal substances; the vegetable matter, from not being so easily soluble as the animal, prevents or restrains the too rapid decomposition of these last, and makes their effect more lasting. The vegetable matter would indeed have but little effect, unless animalized, by first passing through the bodies of animals; while on the other hand, the vegetable are made to decompose more rapidly by the addition of animal substances. The value of these manures does not depend on the quantity so much as their quality. This is a point very little attended to. They should be from the best animals, fed in the best manner, for that which comes from an animal, will be of little value unless that which goes into him is of the best sort. Let an

animal be fed on bad hay, or bad grain or straw, or any coarse material, with little or no nutriment in it, how can it be expected that the manure it makes can enrich the earth, when the creature itself is ill fed and half starved. To produce the best manure the food must be of the best sort; or to say the same thing in other words, the animal should be in the best health. Our author goes with some minuteness into the nature of stable manure, but it is not necessary to alarm our sensitive agricultural readers with any scientific details, however correct or interesting; it is enough to say, that in his opinion and from his experience, this is admirably suited from its rapid decomposition, and the heat it throws out during this process, to cold, sterile, moist, and clayey soils, while to the chalky, dry, sandy, and calcareous, it is extremely injurious; it forces forward vegetation rapidly at first, but when its influence has somewhat diminished and vegetation is left to the natural strength of the soil, it droops and becomes languid. It may be inferred from these ideas, that this kind of manure is considered only transient in its effect, and as of very little use, except on moist and tenacious soils; though it is extremely beneficial on soils containing a large amount of humus or vegetable mould, from its promoting, by the passing off of its ammonia, the decomposition of this substance. When used by itself, the author directs that it should be carried to moist and clayey soils as soon as its first stage of fermentation has commenced, and then buried; fermentation and the heat it produces render the soil looser and lighter, and the repeated ploughings incorporate it with the soil and tend to fertilize it. When used on warm, light soils, he recommends the mixing it with vegetable substances which still retain their succulency, or with earth, and especially with turf. These should be mixed together, heaped up in successive layers, protected from too free an access of air, and moistened when the weather is dry. The manure from horned cattle does not ferment so rapidly or develope so much heat as that from horses. Its effect is not therefore so rapid, but in proportion more lasting, and it may be used on a greater number of crops, and crops more various in their nature. From there being very little apparent increase of temperature during decomposition, it is peculiarly adapted for warm soils; when buried beneath tenacious, clayey soils, it will produce little or no effect until brought into contact with air; and it appears that this is effected by the tuber of the stem keeping up the communication between the air and the buried manure. The manure of sheep produces a very rapid, strong effect, but is soon exhausted. When its moisture is preserved by being thrown into a heap, it decomposes readily, but when this escapes, decomposition takes place very slowly. From its activity, and from its accelerating vegetation too much, the author thinks that it should be employed in smaller quantities than any other kind of manure; in most cases its effect does not outlast the second crop, and it seems of the most advantage on soils containing insoluble humus or vegetable mould. It appears that there is a difference of opinion among agriculturists as to the efficacy of the manure of pigs, and it is probable that this arises from the difference in the food that they receive, there being a far greater influence from this source on the manure of these animals than on that of any other; though there is no doubt of its activity when every proper arrangement is made to preserve all the excrement. The manure of the poultry-yard, which is very little regarded, but which might form for the farmer his native guano, is of the greatest strength and activity. It is very different from that of quadrupeds, and contains a peculiar substance resembling albumen. Vauquelin, a celebrated French chemist, discovered in an analysis of this material, that there was a marked difference between the dung of cocks and that of breeding hens. In the use of this article it is essential that it should be as minutely divided as possible.

E.

For the Farmers' Cabinet.

Swine.

To the Editor.—There is perhaps no race of animals more useful or profitable to the farmer, than a good breed of swine; and it is of great importance that the best breeds should be disseminated throughout the country. I happened yesterday to see a lot of Chester county, pure white pigs, that had been purchased by Mr. Aaron Clement, of this city, for some of his friends in this neighborhood, and for a gentleman in Richmond, Virginia. They were large and perfect in form; they appear like easy keepers, and I am told that they arrive at great weight at an early age; say from three to five hundred pounds. Persons at a distance desirous of procuring the best breeds of cattle, sheep or swine, can apply to Mr. Clement with the greatest confidence.

A Subscriber to the Cabinet.

Philad'a, Sept. 5th, 1845.

In the autumn when you sow your wheat, is generally the best time to sow Timothy seed.

On the preservation of Fruit Trees.

A Paper read by the Hon. SAMUEL D. INGHAM, *before the meeting of the Bucks County Agricultural Society, held at Pineville Hall, August 21st,* 1845.

THE insect which has caused such extensive havoc among Peach Trees in our country, belongs to that most destructive of all the families of the races of insects, the Moth. It has four wings, its body about three-fourths of an inch long, is formed by six belts, gradually tapering from the wings to the tail. Some have supposed that its eggs were laid in the crotches of the limbs, and under the rough pieces of bark, but as the young larvæ of all insects require their peculiar food, the parent generally seeks a place for depositing her eggs where food may be conveniently found. A worthy friend of mine, the late Samuel Johnson, of Buckingham, mentioned to me many years ago, that he believed the Peach Moth laid its eggs on the leaves of the peach trees, which, by curling up, protected them from the weather until hatched, and then supplied them with food until the leaves withered and fell to the ground. He further remarked that the larvæ in searching for supplies of food, on finding the root of the young tree, seized on the tender bark, and if it had strength enough, penetrated to the wood, where it continued to ravage upon its victim until death. This is by far the most probable process of this insect thus far, and it may be remarked that there is a trait in the character of most, if not all wood worms, not generally known, viz: The change from the larvæ to the chrysalis does not take place from any law of necessity *at fixed periods* of *time*, but is prolonged according to circumstances almost indefinitely. I once found a worm in a piece of yellow pine furniture, which, unless it had entered the dry wood after it was painted, must have been there more than twenty years. The amount of work it had done seemed to justify the same idea of its longevity. I conclude, therefore, that the peach worm remains in the tree as long as it finds food to suit, whether the theory of the process of maturation be true or not. There is no doubt that the young larvæ, in a very tender state, commence their attacks on the bark of the tree, and consequently a small matter, properly applied, could not fail to protect the tree from their ravages. The remedy I propose does not depend for its efficacy upon any particular process in the labors of the insect. It is as follows: When the young peach trees are taken from the nursery, let them be very carefully examined, and every worm taken out, or if any trees are materially injured, reject them; when thus examined, &c., put on the lower part of the stalk, and upper side of the root, a thin coating of tar, so warm as to be conveniently applied with a paint brush, then plant the trees in the usual way, and once in two years remove the earth around the stalk and apply another coat of the same material; a quart of tar will suffice for thirty or forty growing trees, and two hands will easily dress two or three hundred in a day. Be careful not to have the tar too hot, nor to make the coat too thick on young trees; when done replace the earth on the roots—after the first application it is not very material at what season it is done.

I have tried the experiment for several years, and while every tree not thus treated with the tar was destroyed by the worms, not the slightest injury was done to the others. I consider the trial I have made, though on but a few trees, as a demonstration of the efficacy of the tar thus applied, as an antidote to the Peach worm.

I have found the same application upon young apple trees, a complete preventive against the ravages of mice. For this purpose the tar may be slightly boiled, and if put on once a year the mice will not touch the bark.—*Bucks County Intelligencer.*

Restraints—Exercise.

We take the following from a Southern paper. Let a word to the wise prove sufficient.—ED.

FROM infancy our girls are waited upon till locomotion becomes painful; they grow up with a fair skin, and from generous feeding are apparently full in development; but there is no muscle, nothing but fat, which the first trials of the physical frame dissipate, and the whole system is collapsed. For the want of exercise in the house and in the open air, added to the infamous and disgusting pressure of the waist and all the vital organs, the secretions are faulty; the skin, instead of being of a firm, velvet-feeling texture, becomes pale and sallow; then come low spirits, peevishness, ennui, disgust.

Nature has decreed that work, health, and happiness, should be closely united. If you want a drink, go to the pump or to the spring and get it; if to bathe, prepare your own bath, or plunge into the running stream; make your own beds, sweep your own rooms, and wash your own clothes; throw away your corsets, and Nature herself will form your bustles; then you will have full chests, glossy hair, rosy complexions, smooth velvet skins, muscular, rounded limbs, graceful tournures, elasticity of person, generous hearts, sweet tempers, good husbands, and long lives of honey-moons.

When we read of the free clothing, the gymnastic exercises, the household duties of the Greeks, we are not surprised at the exquisite loveliness of the marble copies of those most perfect exemplars of Burke's line of beauty. But when, under the Southern system of dress and no exercise, we see great profusion of clothes piled up in rigid opposition to nature's known lines of gradual swell and imperceptible declension and attenuation of limb, we do not fail to remember that the owl, of all birds, having the greatest bulk of feathers, has also the most ragged person; and 'flaccid skins' and 'forked radishes' 'come o'er the spirit of our dream.'

Use of Soap-suds as a Manure.—About twelve months ago I had at my command a tank that received nothing but the suds that came from the laundry; I thought I would try its effects. The first thing I tried it on was hyacinths in pots, and the result was most astonishing. I tried some of Potter's liquid guano at the same time as an experiment, but found the suds most beneficial. Many persons who saw the hyacinths, said they never saw finer. I used it alternately with pure water. I also tried it with strawberries that were forcing, and though the plants were previously very bad ones, the result was very satisfactory. French beans in pots were also a great deal improved by its use, and I think if it were extensively employed it would be found very beneficial to a great many plants. It must be remembered that it was not used fresh from the wash-house, but was allowed to run into the tank, which was always nearly full; by this means it may be used without the least injury to any growing plant requiring such stimulous.—*Gardeners' Journal.*

THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK.

Philadelphia, Ninth Month, 1845.

In a letter dated the 19th of last month, at Salem, Ohio, from a valued friend who had recently journeyed thither from Richmond, Indiana, he says, "Through Indiana generally, wheat has seldom if ever been better. The grain is large and fine. Grass, owing to the drought, is mostly light, though better than farmers had anticipated. Oats are good and corn promises well. Similar observations may apply to Southern Ohio, from the intelligence I have been able to collect. In many parts of Northern Ohio, there has been a great failure of the wheat crop, owing to the late frosts; and some neighbourhoods have suffered so severely from drought, that grass has failed, and farmers will be obliged to sell their stock, or drive it to the Pickawa plains to winter."

Our correspondent noticed in his journey many evidences of bad farming and wretched management, and wishes some "Agricultural paper could find its way to such farmers, to convince them by whispering a few secrets in their ear in a clever manner, of their error, and the inexpediency of any other than good cultivation." But the wish, we can assure him, is to a great extent vain. It is not the slovenly and the unthrifty who read agricultural papers. They do not apprehend they need them.

ENGLISH SHEPHERD DOGS.

A few of these valuable animals of *pure blood*, may now be obtained at $5 each, delivered in Philadelphia. The dam was selected in England last fall, for the present owner, and the pups now o'd enough for delivery, were sired by a thorough bred Shepherd Dog from the State of New York. Early application to be made—post-paid—at the office of the Farmers' Cabinet, No. 50 N. Fourth street, Philadelphia.

FARM IN WHITEMARSH FOR SALE.

The subscriber offers to sell the farm on which he resides, in Whitemarsh valley, Montgomery county, about eleven miles from the city—it contains 155 acres of first quality limestone land, in a high state of cultivation.

The improvements are a large stone mansion, which has recently undergone a thorough repair—stone carriage-house, with granary attached—a substantial stone farm-house—a new tenant-house—a stone barn 120 feet long—hay-house—wagon-house—spring-house, &c., all in excellent repair.

This estate combines the singular advantage of a beautiful country-seat, within a pleasant ride of the city, with a highly improved and productive farm.

For terms, apply to the subscriber residing thereon, or to Eli K. Price, Arch street, Philadelphia.

Ninth mo. 15th. WM. W. LONGSTRETH.

Agency for the Purchase & Sale of IMPROVED BREEDS OF CATTLE & SHEEP.

The subscriber takes this method of informing his friends and the public, that he will attend to the purchase and sale of the improved breeds of cattle, sheep, &c., for a reasonable commission. All letters post paid, addressed to him at Philadelphia, will be attended to without delay. AARON CLEMENT.

March 15th, 1845.

☞ SHORT ADVERTISEMENTS, ☜

The subject matter of which, may correspond with the agricultural character of this paper, will be inserted at the rate of one dollar for each insertion of ten lines or less; and so in proportion for each additional line. Payment in advance.

The Chester and Delaware County Agricultural Society will hold an Annual Exhibition at West Chester on the 7th of next month. They will also have a Ploughing Match. An interesting and exciting time is anticipated. A list of premiums has been forwarded to us.

Josiah Quincy, Jr., of Boston, will deliver the Annual Address at the Exhibition and Fair of the New York State Agricultural Society, at Utica, on the afternoon of the 18th inst., the last day of the Fair.

The Exhibition and Ploughing Match of the Agricultural Society of New Castle County, Delaware, will be held as stated in our last, at Wilmington, on the 17th and 18th insts. For list of premiums see last number.

The Philadelphia Agricultural Society holds its Annual Exhibition at the *Lamb Tavern*, on the 22nd and 23rd of next month—the Ploughing Match on the 24th. For list of premiums, see No. 12, of last volume.

At a half year's meeting of the Royal Agricultural Society, held in London in the Fifth month last, our friend H. Colman, presented a specimen of Jersey marl. The Society has about 7000 members, and an invested capital of nearly $40,000. The people of Shrewsbury, where the Annual Show was held in the Seventh month last, raised £1000 towards defraying its expenses.

The *Indiana Farmer* says that in his ramblings, he saw "hay which had been cut and partly cured, and cocked up and left for a week or two, and was doubtless intended to stand much longer, for there is a fashion with some to let their hay lie about the field in little three feet cocks, until it is convenient to haul it to the stack. This may be in August or September. And sometimes we have seen a farmer with a little sled and rope hauling his hay in October!" Well may the wonder be expressed if these were "book farmers!"

Ice has become an important article of export. It is shipped from Boston in blocks weighing from two to four hundred weight, deposited in saw-dust in the ship's hold, and sent to London. It arrives there with but little loss of weight. A man by the name of Tudor, who first engaged in the ice trade, is said to have accumulated a handsome fortune by it.

The *South Western Farmer*, a spirited paper, heretofore published at Raymond, Mississippi, is discontinued. We regret the necessity for it.

Many of our readers are subscribers to Colman's Agricultural Tour. They will be pleased to learn that the fourth part is now in press at Boston, and we shall be able to furnish it in the course of three or four weeks. N. P. Willis, in one of his letters to the New York Mirror, says, "Mr. Colman, the agriculturist, has made a strong impression on society in England. His strong good sense and fresh originality of mind are well suited to be relished in this country."

Peaches have been again this season abundant and cheap in our market for several weeks. Thousands of baskets were daily landed at our wharves, whence they were distributed to our citizens, and into neighbourhoods where they are more of a rarity. Tens of thousands of baskets have been forwarded to New York, which has had the good effect both to enable the Knickerbockers to luxuriate in our superabundance, and to keep up the price here. We have been informed that the Reybold family in Delaware, including the Major and his four sons, had sent to market up to the 29th ult., 63,334 baskets, and that they had in one day, shipped 5,420 baskets. We found upon our table the other day from these orchards, half a dozen as delicious in flavor, as they were noble in size.

The quantity of rain which fell during the Eighth month, 1845, was 7.30 inches. At the Pennsylvania Hospital for the Insane, in Blockley, there fell 8.14 inches.

Penn. Hospital, 9th mo. 1st.

The abstract from Von Thaer, on page 67, will be valuable to our readers; both they and the Editor thank our Chester county friend for his kindness, and ask a continuance of it.

PHILADELPHIA AGRICULTURAL, HORTICULTURAL, AND SEED WAREHOUSE.

No. 194½ Market street, between Fifth and Sixth streets, South side.

For sale as above, Prouty & Mears' Patent Centre Draught Self-sharpening Ploughs, with all the new improvements attached. These ploughs have taken nine premiums the last fall, in the States of Pennsylvania and Delaware. Subsoil ploughs for one or two horses—Taylor's new Patent Straw-cutters—Guillotine Improved do.—Corn-Planters—Cultivators—Harrows; Turnip-Drills, &c. Garden tools of every description. Also, *Vegetable* and *Flower seeds*, crop of 1844, grown for this establishment, and warranted true to name. Among the collection are several new kinds, very superior—as Seymour's White Giant Celery—Union Head Lettuce. Also, Peas—Beans—Potatoes, &c.—Fruit-trees—Bulbous roots, &c., for sale at the lowest prices, by D. O. PROUTY.

Poudrette.

A valuable manure—of the best quality, prepared in Philadelphia, for sale at the office of the Farmers' Cabinet, No. 50, North Fourth Street, or at the manufactory, near the Penitentiary on Coates' street. Present price, $1 75 per barrel, containing four bushels—$5 for three barrels—$15 for ten barrels, or thirty cents a bushel. Orders from a distance, enclosing the cash, with cost of porterage, will be promptly attended to, by carefully delivering the barrels on board of such conveyance as may be designated. The results on corn and wheat have been generally very satisfactory. Farmers to the south and in the interior, both of this State and of New Jersey, are invited to try it. It is now seasonable for wheat, &c.

JOSIAH TATUM.

We keep on hand at this office, and will supply our friends with Agricultural works generally. Among which are

THE FARMER'S ENCYCLOPEDIA, full-bound in leather;—Price	$4 00
YOUATT ON THE HORSE, with J. S. Skinner's very valuable Additions;	2 00
BRIDGEMAN'S GARDENER'S ASSISTANT;	2 00
THE AMERICAN POULTRY BOOK;	37½
THE FARMER'S LAND MEASURER;	37½
DANA'S MUCK MANUAL;	60
Complete sets of the FARMERS' CABINET, half-bound, 9 vols.	7 50
DOWNING'S Landscape Gardening,	3 50
Downing's Fruits and Fruit Trees of America,	1 75
SKINNER'S Every Man his own Farrier,	50
AMERICAN Poulterer's Companion,	1 25
BOUSSINGAULT'S RURAL ECONOMY,	1 50
FARMERS' & EMIGRANTS' HAND-BOOK,	1 00
BEVAN on the HONEY BEE,	31¼
BUISTS' ROSE MANUAL,	75
SKINNER'S CATTLE & SHEEP DOCTOR,	50
AMERICAN FARRIER,	50
THE FARMER'S MINE,	75
HANNAM'S Economy of Waste Manures,	25
LIEBIG'S AGRICULTURAL CHEMISTRY,	25
" ANIMAL CHEMISTRY,	25
" FAMILIAR LETTERS,	12½

As well as his larger works on Chemistry and Agriculture.

Subscriptions received for Colman's Agricultural Tour—or single numbers sold.

☞ We are prepared to bind books to order.

Seed Store,

No. 23 Market Street, Philadelphia.

The subscriber keeps constantly a supply of White and Red clover, and other grass seeds. Field seeds, consisting of Spring and Winter Wheats, Potatoe, Oats, Barley, and choice varieties of Seed-corn. Also in season, Fruit and Shade Trees. Garden and Bird seeds generally. Guano in parcels to suit purchasers.

M. S. POWELL.

Philad., March 15th. tf.

COATES' SEED STORE,

No. 49 Market Street.

FRESH TIMOTHY SEED,

Of various qualities, from good common seed to the purest and finest that can be produced,

TOGETHER WITH A COMPLETE ASSORTMENT OF

GRASS & GARDEN SEEDS,

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Joseph Rakestraw, Printer